ANALYSIS OF INFORMATION ITEMS IN THE 1985 NES PILOT STUDY

by John Zaller

Results obtained from the 1985 Pilot study indicate that highly valid and reliable measures of political information can be incorporated into the semi-annual NES surveys with little expenditure of new resources. This conclusion rests on a simple, somewhat surprising finding: A 22-item information scale pieced together from odd items in the 1984 pre/post election study performs almost as well as -- and often fully as well as -- a variety of scales built from the 27 information items carried in the Pilot.

In view of the strong showing by standard NES items, the NES Board needs to take only modest steps to improve the measurement of political information. These steps would include the addition of a few new items, replacement of three existing items, and minor adjustments in the formats of the "candidate location" items. Extensive additions would be valuable to some scholars and would have useful payoffs, but, in my opinion, the cost would be difficult to justify.

The principal threat to this assessment is a question raised by Shanto Iyengar (1985): That question is: Is a respondents' level of political information a highly general trait, such that someone who is well-informed on one subject is very likely to be well-informed on others as well? Or do people tend to acquire information about only a few subjects and remain relatively ignorant about most others? From the perspective of measuring political information, this question is a consequential one. If information is a general trait, researchers can confidently use a single, all-purpose measure of information to study information effects across a range of

subjects. If, however, information is a domain-specific trait, researchers may need to construct separate information indices for each policy domain they wish to investigate.

My examination of this issue with data from the 1985 Pilot study leads to these conclusions:

- On the theoretical side, it is clear that the effects of political information on public opinion are, to some extent, domain specific. For example, a measure of foreign policy information predicts the temporal stability of foreign policy attitudes slightly better than does a more reliable but general-purpose measure of information.
- At the same time, the superiority of domain specific measures of information is both modest and uneven. Across a range of different kinds of tests, general purpose-measures of political information perform almost as well as the domain specific measures.

Together, these results suggest that political information is a relatively general trait that can be effectively measured with a general-purpose information scale. Happily, most of the items needed to build such scales are already routinely included in NES surveys.

OUTLINE OF THIS REPORT

The body of this report has three sections. It first describes the construction and properties of the several measures of political information which are employed in the report. It next describes five different tests of the performance of these alternative information scales. These tests involve the effect of political information on attitude stability, attitude consistency, issue salience, support for selected policies of the Reagan administration, and evaluation of presidential performance. As indicated,

domain specific measures of information perform somewhat -- but not a great deal -- better in these tests than does a general purpose measure of information. In the final section, I recommend several steps that would, I think, significantly improve measurement of information on NES surveys with only a modest expenditure of new resources.

MEASURES OF POLITICAL INFORMATION

The 27 information items in the Pilot survey were carried near the end of the Wave II surveys -- that is, at the end of the fourth interview in 14 months for the 345 Wave II respondents.[1] The people who put up with the ordeal of these repreated interviews were obviously a gracious lot; unfortunately, they were also disproportionately well-informed. If one builds a political information scale from the 1984 pre-election survey and divides the respondents into quartiles, one finds that respondents scoring in the bottom information quartile in 1984 constitute only 13 percent of the Wave II respondents, and that respondents scoring in the top information quartile of the pre-election scale constitute 33 percent of the Wave II respondents.[2] This response bias reduces the variance in the information scores of the Pilot respondents, thereby reducing estimates of both the reliability and of the impact of the information scales derived from the study.[3] Although I do not think that the problem is an especially serious one, it should be kept in mind in assessing the conclusions that follow.

1 Respondents were selected from the universe of people who completed the pre- and post-election surveys in 1984 and also met certain other criteria.

2 The sources of the response bias are numerous: the decision to draw the Pilot sample from the universe of post-election rather than pre-election respondents, the need to select respondents who had a telephone, and (probably) the desire of politically uninvolved citizens to remain so. Weighting the sample to correct for the oversampling of the elderly has no significant effect on the problem.

3 Response bias of this kind does not necessarily bias regression estimates of relationships between variables. However, if, as is necessary in this report, one compares scores of respondents from the top and bottom quartiles of a variable whose range has been truncated by response bias, the truncation may reduce the magnitude of the observed inter-quartile differences.

This report focuses on the peformance of information scales pertaining to race, economics, and foreign policy.[4] Items in these three domains are sufficiently closely intercorrelated that it is difficult to establish their discriminant validity (i.e, show that they are measuring different things). When I conducted a principal components factor analysis with varimax rotation on the full set of items, I found a single dominant factor and only traces of domain specific influence.

Yet, as Iyengar shows in his report, it is possible to build measures having a degree of disriminant validity if one is will to eliminate seemingly valid items that correlate highly with items in other domains. The difficulty of this approach, however, is that after eliminating items failing to exhibit adequate discriminant validity, one is left with shorter -- and hence less reliable -- scales. This, in turn, makes it difficult for the domain specific scales to perform well in competition against longer and more reliable measures of general information.

The problem here is perhaps more substantive than methodological. If political information were a highly domain-specific trait, it would be easy to achieve discriminant validity among scale items. The fact that it is difficult to do so suggests that information is a relatively, though not entirely, general trait.

Faced with a tradeoff between discriminant validity and scale reliability, I chose to maximize the latter by incuding all items in a scale

[4] I neglected the items on partisanship (e.g., Jack Kemp's partisan orientation). The reason is that many of the items in my general purpose measure of information are similar to the Pilot's partisanship items; hence the comparative performance of scales based on these items would be uninteresting.

that appeared, on their face, to belong in it.[5] To further boost reliability, I used relevant candidate location items from the 1984 election study. For example, respondents who knew that Ronald Reagan was more conservative than Walter Mondale on the issue of U.S. involvement in Central America got an extra point in the foreign policy information scale.[6] In the end, I was able to bulid a 6-item race information scale with an alpha reliability of .64; a 12-item foreign policy scale with a reliability of .78; and an 11-item economics information scale with a reliability of .73.[7]

In addition, I built two general-purpose information scales. One -- hereafter referred to as the Cadillac information scale -- includes all 27 items from the Pilot Survey and has a reliability of .89.[8] The other -- hereafter referred to as the Election information scale -- is based on items from the 1984 pre- and post-election surveys. Most of these items test respondents' ability to discern differences in the issue positions of candidates and groups, but other items (including recall of the names of

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5 I believe that this decision helped rather than hurt the comparative performance of the domain specific scales. When I compared the performance of preliminary versions of Shanto's (less reliable but discriminantly valid) domain specific scales with the performance of my own (more reliable but only face valid) ones, my longer scales performed significantly better, in relation to a general information scale, than did the shorter ones.

6 Shanto later gave me the working versions of scales that had been designed to maximize discriminant validity rather than reliability. In several preliminary tests, the shorter measures of domain specific information performed consistently less well than the longer scales.

7 The foreign policy scale is correlated with economic information at .72 and with race information at .62; the latter two are correlated at .67. Foreign, economic and race information are correlated with Election information (described below) at .76, .80, and .66, respectively.

8 Only the coding of the eleven open-ended identification items (e.g., identify "Paul Volker") presented difficulties. The SRC coding of these items (v8501 to v8511) included "strictly correct","loosely correct", "affective" (e.g., "he's a crook"), "incorrect", and "don't know". I found that giving full credit for the affective and strictly correct responses and half-credit for for the loosely correct responses produced slightly better results across several tests than scoring only the "strictly correct" responses as correct. I also found that scales based on the coding of the open-ended material done under Iyengar's supervision performed essentially the same as scales based on the SRC coding. Actually, Iyengar's coding was slightly superior in three cases and slightly inferior in three others. An 11-item information scale based on the Iyengar coding correlated with an 11-item scale based on the SRC coding at .91 if partial credit is given for the "loosely correct" code, and at .84 if no partial credit is given.

Congressional candidates, knowledge of which party controls Congress, and interviewer ratings of respondents' apparent levels of information) have been used as well. The Election scale includes 22 items and has a reliability of .87.

The demographic and political correlates of these various scales are essentially the same. The one important exception is race information: blacks, although tending to score lower than whites on other information scales, score higher on race information. But aside from this, there is little evidence that individuals acquire political information on a domain specific basis (see appendix for details).

COMPARATIVE PERFORMANCE OF ALTERNATIVE INFORMATION SCALES

Although there exists no well-developed body of theory or empirical propositions about the effects of political information on political attitudes, researchers commonly employ information scales as predictors of attitude crystalization and coherence. The predominant assumption seems to be that information is a measure of political involvement, and that political involvement engenders firmer, more ideologically grounded attitudes.

Taking the standard assumption to be true, I report in this section on the comparative ability of different measures of information to predict what information scales ought, by this assumption, to be able to predict, namely, crystalized and ideologically coherent attitudes.

Issue Salience. If political information is a measure of political involvement, we ought to find that people scoring high on information are

more strongly concerned with political issues. The four waves of the Pilot study contain several "salience" items suitable for testing this expectation. After each of several policy questions, respondents were asked "How important is it to you that the federal government do what you think is best on this issue of ... ? Extremely important, very important, or not important at all to you?"

As can be seen in Table 1, measures of political information are moderately correlated with these measures of issue salience. It is also apparent that the domain specific measures of information have no strong advantage in predicting levels of issue salience.[9] In four of the cases, a general information index was most effective and in the other three a relevant domain specific scale was best (note boldface in table).

Attitude Crysalization. One of the central issues in the so-called non-attitudes debate is whether various measures of political involvement -- information, media exposure, education and partication -- are positively correlated with response stability, i.e., giving the same answer to questions that have been asked two or more times of the same person. The most recent and perhaps best evidence suggests an affirmative conclusion (Feldman, 1985), but in view of the limited success of past efforts to establish the association between information and stability (especially

[9] I should note a possible source of spuriousness in these results. Respondents who had no opinion on a policy item were not subsequently asked about the salience of the issue to them; I have coded such people in the lowest salience category. A problem arises, however, because the Election information scale depends heavily on these same policy items; in particular, respondents having no opinion on an issue were not asked to locate the candidates on that issue. In my coding of these items for the Election information scale, such people were assumed not to know where the candidates stood on these issues. The problem is that for some of these issues, one set of policy items may be involved twice: once as a salience test and once as an information test. If this problem occurred on a wide scale, it could introduce a spurious correlation between information and salience. However, the direct overlap would involve, at most, only one information item out of 22 in the Election information scale.

Table 1

Information and Issue Salience

	Cadillac Information	Election Information	Foreign Information	Economic Information	Race Information
Central America (Pre-)	.37*	.40	**.44**	.38	.31
Central America (Post-)	.37	.37	**.42**	.35	.31
Central America (Pilot)	.24	**.30**	.25	.25	.24
Job Guarantee (Post-)	.24	**.28**	.22	.26	.24
Aid to Minorities (Post-)	.19	.23	.15	.21	**.28**
Gov't Services vs. Spending (Pre-)	.32	**.38**	.32	.34	.31
Gov't Services vs. Spending (Post)	.36	**.43**	.36	.40	.33

* Cell entries are correlations between the information index and the standard NES measure of salience, i.e., "How important is it to you that the federal government do what you think is best on this issue of ...."

Erikson, 1979; also Achen, 1975), it is too soon to venture a firm judgment. Nonetheless, it remains reasonable to assume that political involvement should be associated, on average, with more highly crystalized attitude structures.

In Converse's original statement of the non-attitudes hypothesis, the claim was that "where any single dimension is concerned, very substantial portions of the public simply do not belong on the dimension at all. They should be set aside as not forming any part of that particular issue public" (1964: p. 245). If one adheres to the logic of this statement, people who express no attitude at all, as well as people who switch randomly from one survey to the next, should be counted as having poorly crystalized attitudes or perhaps non-attitudes.

Unfortunately, virtually everyone who has investigated this problem has set aside respondents stating "no opinion" on one or more of the interviews.[10] Since these respondents are disproportionately poorly informed, and since most of them do drift in and out of substantive response categories over repeated interviews, the effect of the exclusion is the elimination of large numbers of uninformed respondents who ought to count as evidence in favor of the non-attitudes hypothesis. This has, in turn, tended to bias most stability tests against finding information effects.

In this section I present two tests of the thesis that attitude crystalization is correlated with information. In the first I create a 0-1 variable that divides respondents into two groups, those who offer the

[10] Dean and Moran, 1977, are the only exceptions of which I am aware. Although they test their model on only a single policy item, they appear to have turned up substantial differences in attitude crystabilization across a dichotomous education variable.

same substantive opinion on both interview waves,[11] and those who either change their response between interviews or offer no opinion on one of the surveys. The second test simply correlates responses on one interview with responses at a second interview; to avoid excluding "no opinion" responses as missing missing data, I recode "no opinion" responses to the neutral middle position on the policy scales. If individuals give "no opinion" responses each time they are asked about an issue, or if they vacillate between no opinion and the middle option, they are counted as stable; if they move between no opinion and an off-center opinion, they are counted as unstable.

As can be seen in the Table 2, the domain specific measures of information have a consistent though small performance advatantage over the two general-purpose information measures. The average correlation between the 0-1 crystalization variable and each of the two general information scales is .18; the average correlation between crystalization and the relevant domain specific scale is .21. (Recall that the 27-item Cadillac scale includes all of the items in each domain specific scale.) Figure 1 gives an idea of the magnitude of these associations. It shows that roughly twice as many people in the top quartile of the information scales exhibit crystalized opinions as do people in the bottom information quartile.

Results from the second set of crystalization tests are shown in Table 3. As can be seen, the domain specific scales have little if any performance advantage over the Election information scale.

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[11] All policy items were collapsed to four cateogies: liberal, conservative, centrist, and no opinion. In some cases, comparisons are made between items that were originally 7-point scales (plus no opinion) and items that were originally 5-point scales.

Table 2

Information and Attitude Crystalization (I)

	Cadillac Info.	Election Info.	Foreign Info.	Economic Info.	Race Info.
Central America (Pre- to Post-)	.24†	.18	**.27**	.23	.21
Central America* (Pre- to Pilot)	.21	.20	**.23**	.22	.19
Central America* (Post- to Pilot)	.24	.21	**.26**	.22	.21
Defense Spending* (Pre- to Pilot)	.13	.09	.11	**.16**	.08
Job Guarantees (Pre- to Post-)	.13	**.20**	.09	**.20**	.12
Gov't Services (Pre- to Post-)	.20	**.26**	.16	.24	.22
Aid to Minorities* (Pre- to Pilot)	.10	.12	.10	.09	**.17**

† Cell entries are correlation between information scale and 0-1 variable measuring response crystalization.

* Forms of questions do not match exactly.

Figure 1

Information and Attitude Crystalization

* Figure shows percent of respondents who state the same substantive opinion in two successive interviews; 'don't know' responses are counted as uncrystalized responses.

Table 3

Information and Attitude Crystalization (II)

	Low Info.	Low-Med. Info.	High-Med Info	High Info.	
Central America	.58†	.51	.50	.64	= Election Info.
(Pre- to Post-)	.42††	.56	.57	.62	= Foreign Info.
Central America*	.24	.40	.43	.56	= Election Info.
(Pre- to Pilot)	.28	.20	.52	.54	= Foreign Info.
Central America*	.38	.42	.45	.66	= Election Info.
(Post- to Pilot)	.44	.35	.54	.56	= Foreign Info.
Job Guarantees	.28	.31	.37	.62	= Election Info.
(Pre- to Post-)	.29	.31	.39	.59	= Economic Info.
Gov't Services	.32	.39	.47	.53	= Election Info.
(Pre- to Post-)	.35	.34	.44	.62	= Economic Info.
Aid to Minorities*	.21	.53	.63	.45	= Election Info.
(Pre- to Pilot)	.37	.22	.67	.52	= Race Info.
AVERAGE (ELECT. INFO):	**.35**	**.43**	**.48**	**.56**	
AVERAGE (DOM. SPEC.):	**.36**	**.33**	**.52**	**.58**	

† Cell entry is correlation between the pre-election Central America item and the post-election Central America item, among respondents scoring in the bottom quartile on Election information scale.

†† Cell entry is correlation between the pre-election Central America item and the post-election Central America item, among respondents scoring in the bottom quartile on Foreign policy information scale.

* Forms of questions do not match exactly.

Attitude Consistency. Another contention originating in Converse's seminal article on mass belief systems was that "attitude constraint" -- the tendency to be ideologically consistent across a range of issues -- increases with political involvement. The reason, presumably, is that the highly involved are more likley to possess the contextual knowledge necessary to make the link between particular issues and their own, more general ideological orientations. Although the warrant for this claim in the original Converse article was weak, subsequent research has borne it out.[12]

Drawing on both the 1984 election study and the 1985 Pilot, it was possible to locate clusters of policy items that match up fairly well with the three domain specific information scales. On foreign policy, these issues include American involvement in Central America, being tough with Russia, and levels of defense spending; in the economic domain -- where the match to the information scale is weakest -- the cluster involves attitudes toward the general level of government spending and services, the balanced budget amendment, and welfare spending; and on race, the items used were government aid to minorities, the speed of the civil rights movement, busing to achieve school integration, government efforts to secure equal rights, and homeowners' rights to sell to whomever they please.

Levels of attitude consistency within each policy cluster are, as expected, positively associated with political information. Across all tests, the average inter-item correlation was .20 within the lowest information category and .40 within the highest information category.[13] Yet

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[12] Converse, 1964, p. 229; Nie, Vrba and Petrocik, 1976, figures 9.2 and especially 9.4; Barton and Parsons, 1977, pp. 170-172; Stimson, 1975; Chong, McClosky and Zaller, 1983; for contrary evidence, see Neuman, 1984.

[13] The increase associated with involvement was greatest for foreign policy items and smallest for the race items.

as the data in Figure 2 show, the domain specific information measures performed no better than the Election information scale.[14]

Information Flow and Policy Preferences. Much of my own work has been an attempt to extend the argument Converse developed in his 1962 paper on "Information Flow and the Stability of Partisan Attitudes." In that paper, Converse argued that mass susceptibility to campaign influences is non-monotonic with respect to political involvement: The most highly involved are heavily exposed to the campaign but too politically sophisticated to be affected by it; the least involved would be easily influenced *if* any campaign messages reached them; however, the uninvolved pay too little attention to politics for this to happen and hence remain passively stable. This means that the moderately involved are most likely to be influenced: They pay enough attention to politics to be exposed to novel influences, but are not sufficiently sophisticated to resist them.

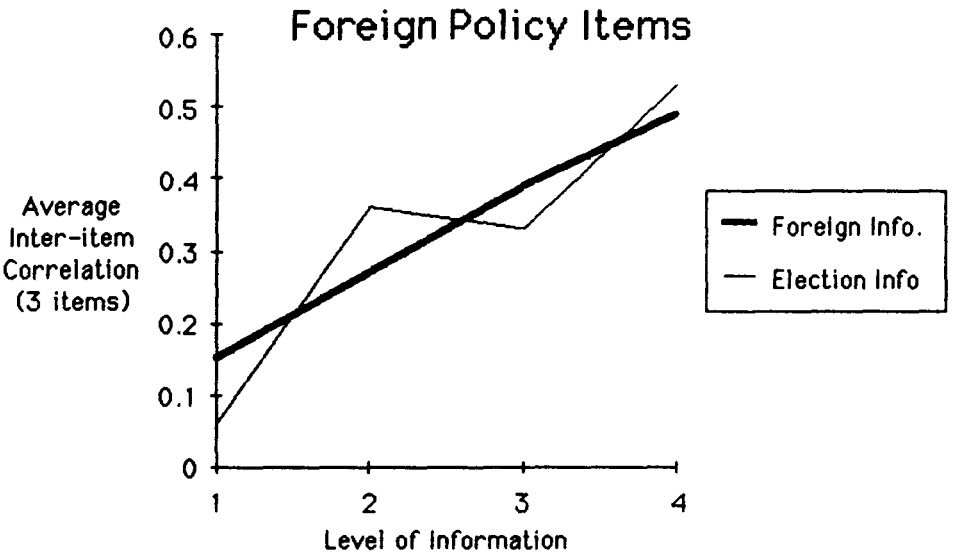
The theory underlying Converse's argument is that attitude change depends on a two-step process involving 1) exposure to persuasive messages, which is positively correlated with involvement, and 2) acceptance of the message (given exposure to it), which is negatively correlated with involvement.

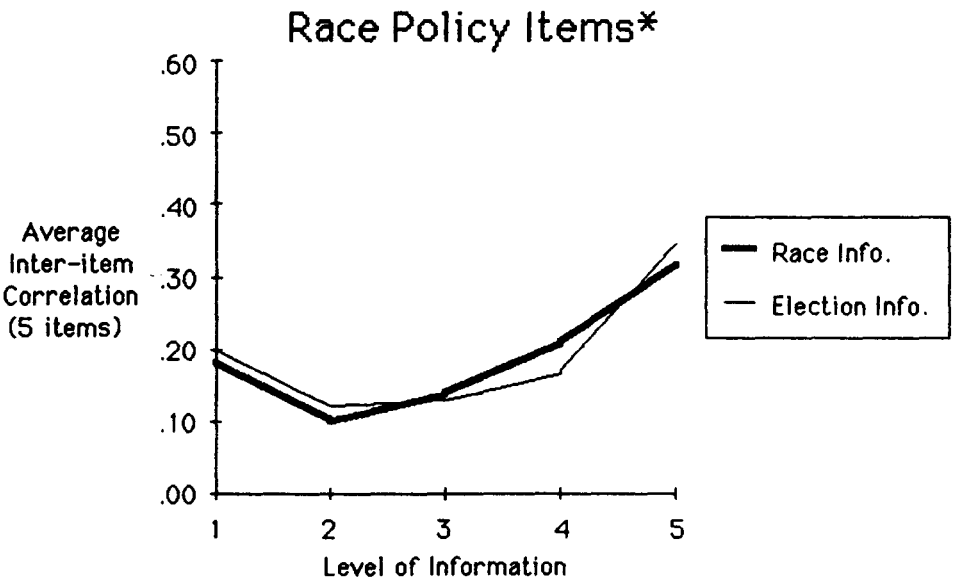
In attempting to extend Converse's work to citizens' policy preferences, I reason as follows: If government leaders attempt to mobilize support for a new policy -- such as a balanced budget amendment or greater U.S. involvement in Central America -- political involvement should clearly be

[14] The top and bottom information categories varied from one scale to the next, depending on the accidents of response frequency. However I took care to insure that in every case, the top and bottom categoies of the domain specific scales contained fewer respondents than the comparable categories of the Election scale. This coding procedure created more extreme categories for the domain specific scales, thus giving them a slight advantage over the Election scale.

Figure 2

Information and Attitude Consistency





* White respondents only.

positively correlated with exposure to the government line. Given that the government message is conservative (as in my two examples), we should expect that for liberals the relationship between involvement and policy support will be curvilinear: Just as in Converse's election scenario, uninvolved liberals will pay too little attention to be exposed to the official line, highly involved liberals will be exposed to it but resist it as ideologically uncongenial, and moderately involved liberals will be most heavily influenced. For conservatives, however, our expectations are quite different. Highly involved conservatives will be heavily exposed to the government line, but as long as this messge is conservative, they will have no reason to resist it. They will simply accept the conservative line to which they are exposed. Hence for conservatives who are responding to a conservative message, the two-step model reduces to a single step -- exposure -- and the expectation is that the relationship between involvement and policy support will be monotonically positive (Zaller, 1985).

The dynamics implied by this model are obviously a severe abstraction from reality. Most importantly, this simple model makes provision only for a single, dominant message -- the government message. Yet on most policy issues, there are at least two sides and sometimes more. Members of the public are then exposed to and may choose between two or more positions. However, in cases in which the administration takes a strong position and sets the tone of public debate -- as it may be said to be doing in the case of both the balanced budget issue and the Central America issue -- one may reasonably set up the problem in terms of the diffusion of a single, relatively dominant message through a population that varies both in information and ideological orientation.

To test these expectations, it was necessry to have a measure of ideological orientation that was independent of respondents' positions on particular issues. Two sets of items met this criterion: the new Conover-Feldman moral tolerance battery, and a series of items on economic individualism and equality (hereafter referred to as individualism). Although the moral tolerance items worked adequately, the economic individualism items (perhaps because there were more of them) consistently produced somewhat stronger results. Because I wanted the ideology scale to predict reponses to highly partisan issues, I also included in it respondents' party identification.[15]

As can be seen in Figures 3 and 4, the data conform quite nicely to theoretical expectations. Among liberals, the relationship between information and support for Presidential policy is non-monotonic in both cases; among conservatives, the relationship is monotonically positive.[16] The domain specific and and Election information scales work approximately equally well in confirming these expectations. The regression statistics for some of these data are shown in Table 4.[17]

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15 The items were v402 thru v407, v84201 thru v8205, and v8401 thru v8406. Because I wanted to get at what I took to be an underlying personality dimension of each respondent, I used regression to purge these items of the effects of accidental status and backgrounds factors, namely, age, sex, race, education and income (see Kugler, 1983). Respondents scoring in the conservative half of the purged scale and who were Republicans were scored as conservative; respondents scoring in the liberal half of the scale and who were Democrats were coded liberal. The remainder were coded centrist. This produced a roughly 25-50-25 distribution of respondents.

16 When elites are intensely and roughly evenly divided in their debate of an issue, the expected patterns of mass attitude formation and change are quite different than I have described them. I deal with these patterns in "A Generalization of the Converse-McGuire Model to the Case of Conflicting Messages" (1986). The more complex "two-message model" described in that paper would be appropriate for the NES policy items on defense spending and being tough on Russia.

17 The low r-squares in these equations appear to have two sources: First, the distribution of information scores has a strong central mode; that is, most respondents are bunched up in the middle regions were information effects are modest. Second, the dependent variable is scored dichotomously as support/non-support; this virtually assures large amounts of unexplained variance. I feel, therefore, that the best appreciation of the power of the model can be gleaned from examining the range of support scores predicted by it, as shown in the two figures.

Figure 3

Information and Opinion on Central America

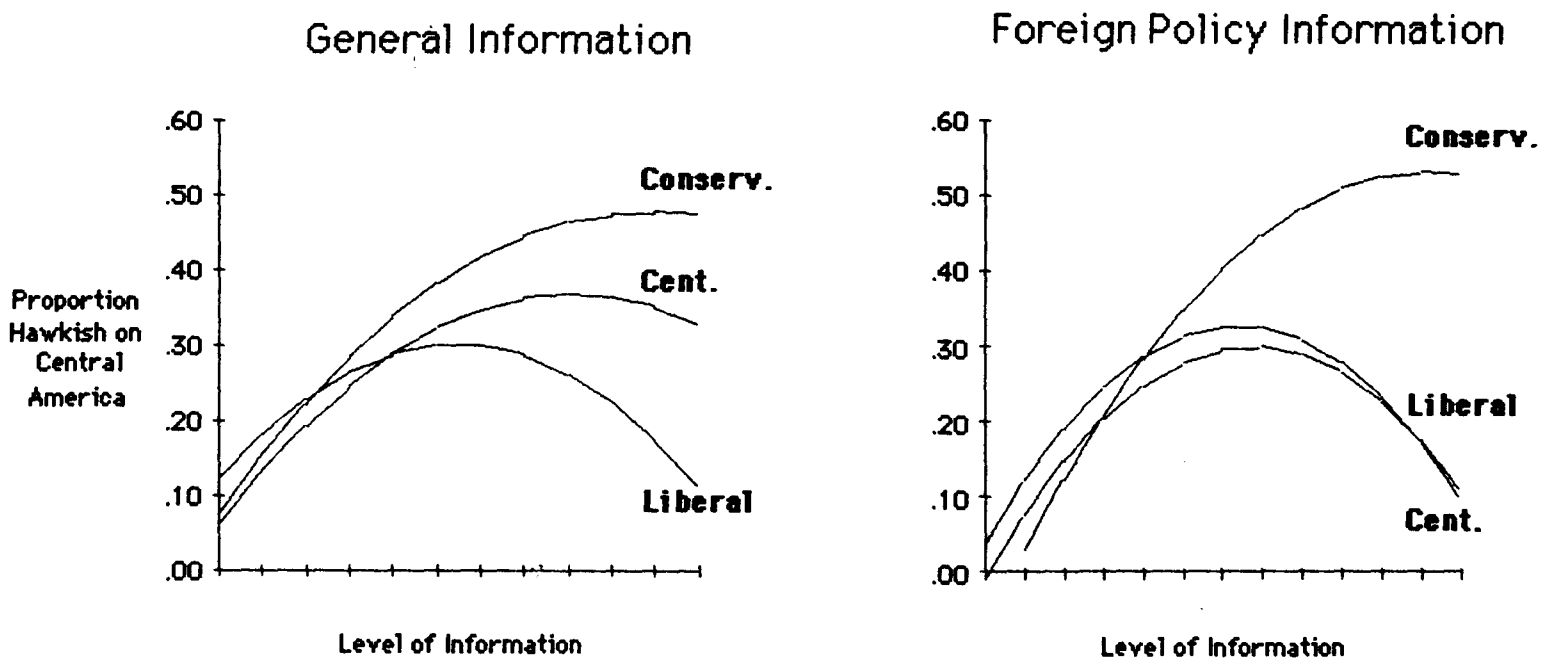

Figure 4

Information and Support for Balanced Budget Amendment

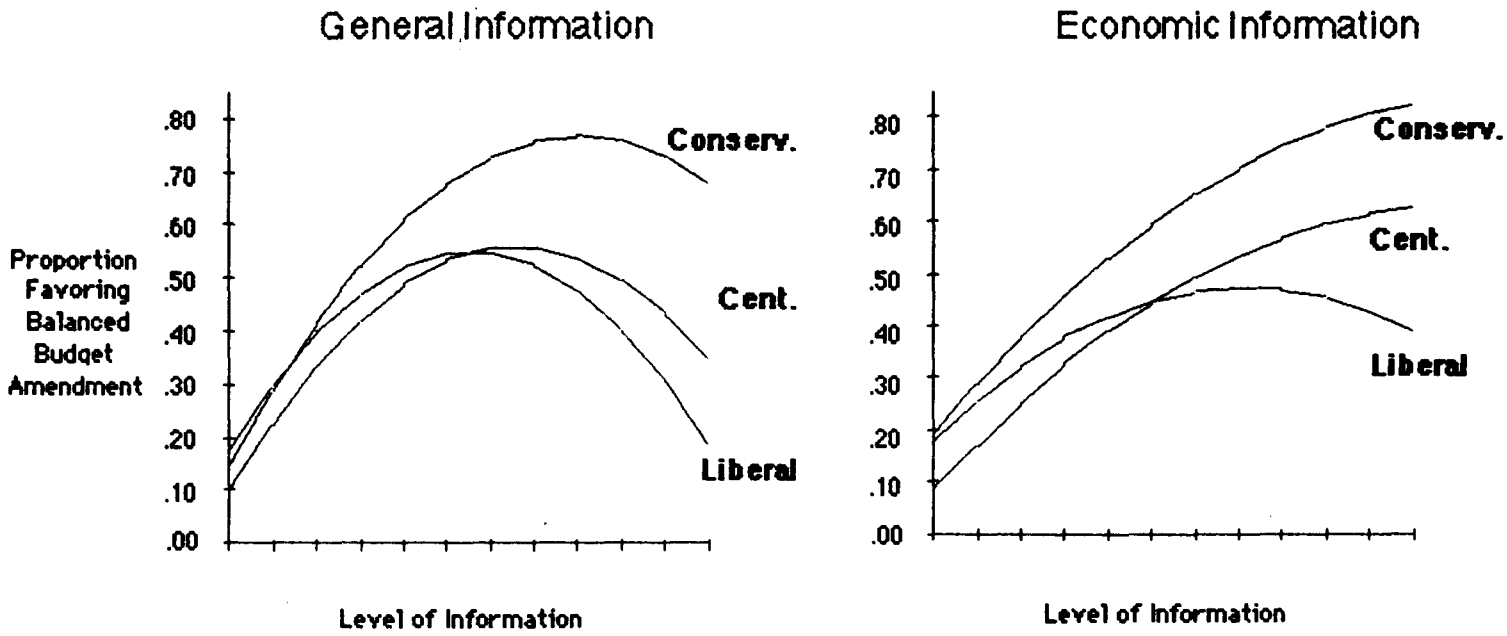

Table 4

Regression Coefficents for Information Flow Tests†

	SLOPE (B)	STANDARD ERROR	BETA	PROB. VALUE
Election Information	.181	.05	2.07	.00
Election Info-squared	-.0024	.0008	-1.77	.00
(Centrist) X (Information)	.006	.0012	.20	.64*
Centrist) X (Info-squared)	-.00031	.0035	-.34	.40
Liberal) X (Information)	.017	.013	.53	.21
(Liberal) X (Info-squared)	-.00064	.00037	-.72	.09
Sex (0-1)	-.21	.05	-.22	.00
Race (0-1)	-.12	.09	-.06	.20
Constant	-2.40	.86		

DEPENDENT VAR: Favor budget Amendment, (0-1) R = .43 Adj. R^2 = .16

	SLOPE (B)	STANDARD ERROR	BETA	PROB. VALUE
Economic Information	.154	.091	.94	.09
Econ.Info-squared	-.0028	.0027	-.58	.30*
(Centrist) X (Econ. Info)	-.0019	.023	-.03	.93
Centrist) X (Econ. Info-squared)	-.00031	.001	-.1	.81
Liberal) X (Econ Info.)	.029	.026	.48	.27
(Liberal) X (Econ.Info-squared)	-.0022	.0014	-.70	.11
Sex (0-1)	-.18	.05	-.18	.00
Race (0-1)	-.09	.09	-.04	.34
Constant	-.93	.77		

DEPENDENT VAR: Favor budget Amendment, (0-1) R = .44 Adj. R^2 = .17

*Although many of the coefficients reported in this table are not statistically significant, it is accepted practice to include all variables in a regression that theoretically belong in it, especially in regressions involving small samples (Achen, 1983).

† The basic model estimated in these regressions makes the dependent "policy support" variable a function of information and information-squared; interaction terms further allow these information effects to vary across different ideological groups. This specification can be formally deduced from the assumptions that exposure to pro-government communcations is positively associated with information, that acceptance (given exposure) is negatively associated (with the strength of the negative association varying with ideology), and that policy support dependents on a multiplicative function of the probabilities of exposure and acceptance (namely, that Prob(Support) = Prob.(Exp.) X Prob. (Acc.| Exp.).

Evaluations of Presidential Performance. The logic of the "information flow" argument applies equally well to citizen evaluations of presidential performance. Given that the news about a conservative president is predominantly favorable, we should expect that, among conservatives, the relationship between information and positive evaluations of presidential performance will be monotonically positive. Among centrists, this relationship should begin to become non-monotonic, and among liberals it should be sharply non-monotonic or even negative.[18]

Popular evaluations of President Reagan's performance in four domains -- foreign policy, the economy, racial policy, and relations with South Africa -- do conform to these expectations. The results, however, are highly similar across all three types of information scales. In fact, over the six "information flow" tests described in this section and the last, there is essentially no basis for choosing between the Election, Cadillac, and domain specific scales: the average r-squares over each scale's six equations were, respectively, .186, .189, and .195.

The data shown in Figure 5 depict evaluations of Reagan's handling of racial affairs. But instead of varying the information scales in this figure as I did in Figures 3 and 4, I have varied the ideological control variable. The results seem somewhat stronger when a "race attitudes" control

[18] The conditions under which there exist negative associations between information and persuasibility are specified in Zaller, 1985. Briefly, when a message is sufficiently intense or "loud" to penetrate to the least involved strata of society, the uninvolved tend to be without resources for resisting it; hence, what is normally a non-monotonic relationship becomes, in these cases, a negative one. It seems likely, in the present case, that Reagan's successful presidential personality is a "louder" message than presidential policy on any given issue, incuding Central America and the balanced budget amendment.

variable is used rather than an "economic individualism" control.[19] That is, people who are conservative on "race attitudes" are more favorable toward Reagan's race policies (at high levels of political involvement) than are comparably involved people who are conservative on "economic individualism." Or, to put the matter another way, the expected monotonically positive relationship between information and positive evaluations is more clearly present among conservatives for the test involving "race attitudes" as the control variable.

What Figure 5 shows, in effect, is the importance of domain specific measures of ideology. My sense from this and other investigations is that ideology is, like political information, a fairly but not completely general trait. Results like these further suggest that it is probably more important to explore and develop domain specific measures of ideology than of political information.

SUMMARY AND RECOMMENDTIONS

On several tests, domain specific information scales tend to perform better than general purpose information scales, but only modestly better. The domain specific scales achieve this performance advantage inspite of being shorter and hence less reliable.[20] These results would seem to have two fairly clear implications:

- Iyengar is correct in his argument that people have some tendency to acquire information on a domain specific basis. Researchers who want to show strong information effects on public opinion should try, whenever

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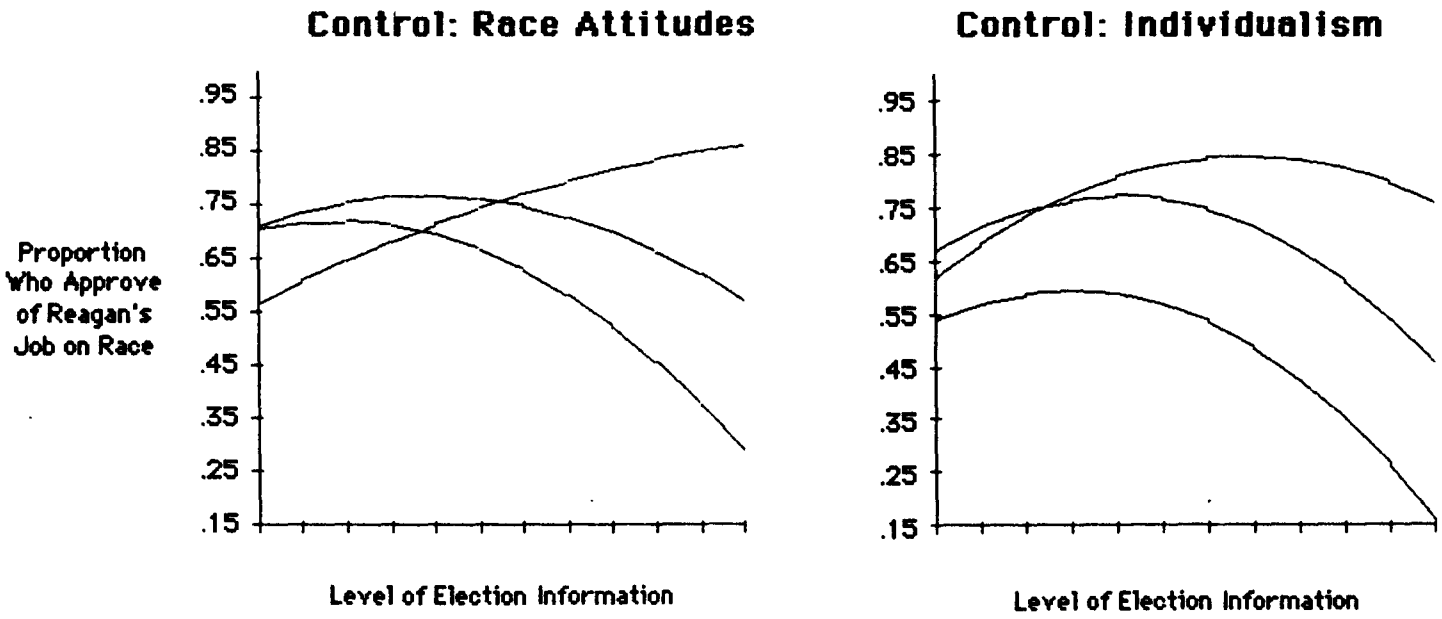
[19] Items in the race attitudes variable include busing, the speed of the civil rights movement, government aid to minorities, government efforts to guarantee equal rights for all, and homeowners' rights to sell to whomever they choose. The scale was purged of the influence of demographic variables, as described above.

[20] The true score variance of the Election scale is about a third greater than the true score variance of the foreign policy and economic policy scales, and about 75 percent greater than that of the race policy information scale.

Figure 5

Assessing Presidential Performance on Race Policy



possible, to use domain specific measures of information. Thus if, for example, the American Council on Foreign Relations were to sponsor a survey of public attitudes toward foreign policy matters, it would be well-advised to include on its survey a measure of foreign policy information.

- Nonetheless, since the advantage of domain specific scales over general information scales appears to be relatively modest, it is not worthwhile for the NES to make the heavy investment necessary to build highly reliable measures of domain specific information. The results from the Pilot survey would seem to establish this point rather conclusively: A survey containing 27 information items (spread over four domains) was unable to do a significantly better job of demonstrating the effects of political information than was an NES Election study that had made no particular effort to measure information.

In view of all this, my recommendation to the NES Board is that it make certain modest changes in the existing "location" items so as to facilitate their use as information tests, add three new items, and replace three others. More specifically, my recommendations are:

1. At present, respondents who say they have no interest in a policy issue are excused from answering the (sometimes lengthy) battery of follow-on items about the locations of various candidates and groups on those issue dimensions. This makes it impossible to use these "location items" as information tests for the excluded respondents (normally five to ten percent of all respondents on major issues). Yet these location items are, as I have indicated, the heart of the Election Information scale used

throughout this report.[21] My first recommendation, therefore, is that these interest screens be removed -- but only in selected cases. It is obviously unnecessary to ask people with no opinion on an issue where some dozen or so candidates and groups stand on that issue; but it would not seem a great burden on anyone to ask all respondents to place just one pair of candidates (or groups) on each major issue.

When I made this same recommendation last summer, many members of the Pilot Committee appeared to regard it skeptically. They doubted that an information scale heavily dependent on the "location items" could have much validity. I hope that this report will help to dispel this skepticism. As I have sought to show, the 22-item Election information scale is essentially as effective as an information scale that includes all 27 information items in the Pilot, and only modestly less effective than measures of domain specific information.

2) The second most important component of the Election information scale is the interviewer ratings of each respondent's level of political information. I argued in last summer's memo that these five-point items were very powerful, and that they were essentially free of contamination by interviewers who might be biased in favor of higher status respondents. However, I had no way of quanitfying the power of these items in relation to other items. The 27-item Cadillac information scale now provides a criterion variable against which to evaluate the interviewer rating items.

I conducted my evaluation as follows: I first broke each rating item into four 0-1 variables: the bottom category versus the top four, the bottom two

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[21] In building the Election information scale, I have assumed that respondents do not know the positions of candidates on issues which do not interest them. This assumption, which is undoubtedly incorrect in a few cases, would be unnecessary if, as I recommend, the interest screens were lifted for selected questions.

categories versus the top three, and so forth. Since there is both a pre-election and a post-election rating scale, this procedure yielded eight 0-1 variables. I then performed a logistic regression in which the eight dichotomous information items were the dependent variables and the 27-item Cadillac scale was the indpendent variable.[22] The results, shown in Table 5, confirm the discriminating power of the interviewers' ratings. The average value of the discriminating coefficient over the eight dicohomies was 1.70; by comparison, the average for the 16 closed-ended information items on the Pilot was 1.18, while the average for the 11 location items in the Election information scale was 1.04. Table 5 also suggests, incidentally, that interviewers were more effective in making discriminations among respondents in the lower and middle ranges of information than in the top range.

My recommendation is that the interviewer rating items be retained unchanged. They are highly effective as measures of political information.

3) The NES has usually carried a modest number of items designed as direct tests of political information. These items have varied somewhat over the years, apparently depending on what seemed important at the time. I believe this practice should continue. If I am correct in maintaining that information is a fairly general trait, it should not matter a great deal what subjects are covered by information items. Indeed, one might contend that what is most important is to have many diverse items, including a good selection of topical items. I would, however, recommend that all

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22 As I showed in last summer's memo, logistic regression provides estimates of an item's discriminating power (in effect, reliability) that are independent of the variance of the item. This makes this technique superior to standard item-to-total estimates of item reliability, which do depend on the variance of the item and which tend to greatly underestimate the power of very easy and very difficult items.

Table 5

Discriminating Power of Interviewer Rating of Respondent's Information Level

	ONE VERSUS TWO-FIVE**	ONE, TWO VERSUS THREE-FIVE	ONE-THREE VERSUS FOUR,FIVE	ONE-FOUR VERSUS FIVE
Pre-election rating Variable	2.4*	1.90	1.34	1.14
Post-election rating variable	2.56	1.81	1.44	1.10

* Cell entries are coefficients obtained from regressing the dichotomous items on a standardized general information scale.

** The rating scales that were recoded to form each dichotomy run from one (low information) to five (high).

information items, whatever their subject matter, meet several criteria. In addition to the obvious criterion of high discriminating power, these are:

A. Direct information items should be fairly difficult, such that perhaps 10 to 20 percent of respondents will pass them. I suggest this criterion for two reasons. First, the candidate and group location items do a good job of distinguishing people who know essentially nothing about politics from people who know something; they seem much less useful for picking out persons who are really well-informed. Second, as just shown, the interviewer ratings of respondent information seem most effective in the lower and middle ranges. Our need, therefore, is to add items that discriminate well in the upper ranges of information (specific recommendations will follow).

B. Information items should, if possible, concern subjects that will be inherently interesting to particular research communities. For example, researchers working on retrospective voting might be especially interested in the existing NES question on which party controls the House and Senate (pre-election but not post-election).

C. Information items should avoid redundancy and near-redundancy. Simple though this criteria is, it might be used to argue against retention of three of the five straight information items contained in the 1984 Election Study. In the pre-election survey, respondents were asked to locate themselves on the liberal-conservative continuum, and then afterwards were asked to place each party on that continuum; these placement items can, of course, be readily converted to an information test of which party is more conservative. Nonetheless, respondents to the post-election survey were

directly asked, in a two-part (i.e., expensive) information test, whether one of the national parties is more conservative and, if so, which party that is.

Although it is a less obvious case, I feel that the four items devoted to the question of which party controls Congress -- a pre- and a post-election control question for each house -- involve a substantial degree of redundancy. Although, as just indicated, there are excellent reasons for retaining the pre-election Congress control questions, the post-election items have no special value to scholars of retrospective voting and, as far as I can see, represent third and fourth probes into the same general subject matter. There is no efficiency in this. If there is strong interest in questions about Congress per se, it would be preferable to include queries about the term of office of a U.S. Senator or the name of the House Speaker. Moreover, as I argued in my memo of last summer, there is a clear tendency for respondents to answer the post-election control items in terms of "who gained more seats" rather than "who controls," which is probably why, as I showed, the post- items tend to have lower discriminating power.

I would recommend, therefore, that the post-election control questions, as well as the direct questions on which party is more conservative, be replaced by other direct information items.[23]

Figure 6 contains performance data on all 27 of the information items carried in the Pilot.[24] The items shown in boldface are the six that best

[23] All three items recommended for elimination have moderate difficulty factors and moderate discriminating power.

[24] The 11 identification items were regressed on a 38-item scale that included all of the Election information items plus the 16 closed-ended Pilot information items. The 16 closed-ended Pilot items were regressed on a 33-item scale that included the 22 Election items plus the 11 Pilot identification items. All individual items were recoded to 0-1 variables, with the "strictly correct" code taken as the only correct answer. SRC codes were used.

Figure 6

DISCRIMINATING POWER AND DIFFICULTY FACTORS OF PILOT INFORMATION ITEMS

	ITEM DIFFICULTY	DISCRIMINATING POWER
Is U.S. a member of UN?	4.80*	2.14**
ID Paul Volker	-2.89	2.07
ID Thurgood Marshall	-2.02	1.76
Partisanship of Cuomo.	-0.60	1.63
Whose ally is Poland?	-0.18	1.59
Where is U.N. headquarters?	0.51	1.58
ID Caspar Weinberger	-1.54	1.39
ID NATO	-0.71	1.38
Partisanship of Kemp.	-1.35	1.36
ID affirmative action	-1.05	1.34
ID Daniel Ortega	-2.48	1.27
Partisanship of blacks.	1.03	1.17
Know unemployment rate.	-0.40	1.11
Partisanship of corp. executives.	0.52	1.07
Is India a democracy?	-1.02	1.00
ID Martin Luther King	1.94	0.95
Know inflation rate.	-0.36	0.93
ID NAACP	0.52	0.91
ID Dow Jones Index	-0.22	0.87
Partisanship of feminists.	-0.16	0.86
Is China a democracy?	0.98	0.85
Partisanship of people on welfare	0.43	0.83
Partisanship of stockbrokers.	0.60	0.83
Whose ally is Turkey?	-1.55	0.78
ID George Bush	1.56	0.77
ID Richard Nixon	1.93	0.27

* High positive values indicate "easy" information tests; low negative values indicate "difficult" items. The figures are the intercepts in logistic regression of 0-1 item on standardized general information scale.

** High values indicate items having high discriminating value (a measure of high reliability). The figures are coefficients in logistic regression of 0-1 information items on general information scale.

meet the criteria of high difficulty, non-redundancy and high discriminating power.

It is apparently an accident that all six of the top-rated items have been obtained from the question format in which respondents were asked to identify a particular person, group or term. Whether this accident is a happy one is unclear. An advantage of the format is that it takes interviewers relatively little time to ask each new identification item.[25] Transcribing the answers can also go very quickly if respondents simply say they don't know (on these six identification items, the average "don't know" rate was 58 per cent). Yet if respondents do give an answer, it takes time both to write it down and later to code it. I am unable to evaluate the cost of this undertaking. I can only say that these items meet very well the criteria set out above, and that if the NES does not use these items, there would be a shortage of items meeting the criteria (particularly the criterion of high item difficulty).

To summarize, my recommendations are:

- Remove the interest screens from about a ten pairs of candidate placement items.
- Maintain without change the pre- and post-election items in which interviewers rate the political information of their respondents. Also retain the two items asking about pre-election party control of the House and Senate.
- Replace three of the direct information items on the 1984 Election study with identification items from the Pilot.

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[25] The question stem is: "I am going to read a list of individuals, groups, and terms. Please try to identify each." Thus, each new item consists only reading the name of the individual or group to be identified.

- Add three direct information items beyond those already included on the 1984 NES survey.

Appendix

To determine the demographic and political sources of political information, I regressed the serveral information scales on a battery of 15 predictor variables. The results are reported in the table on the next two pages. By scanning each row of the table, one can compare the impact of each predictor on each information scale. To ease interpretability, the dependent information scales -- but not the independent predictor variables -- have been been standardized. Consider, for example, the impact of gender on political informaiton (see row two of the table). Being a male rather than a female boosts one's expected information score by .56 standard deviations on the Election information scale, by .67 standard deviations on the foreign policy scale, by .37 standard deviations on the race information scale, and so forth.

Given that the battery of predictor variables is moderately co-linear and that the sample size is fairly small (n=345), one should be cautious in interpreting small differences in the coefficients. I see only two cases in which the correlates of an information scale are clearly distinctive. One, as noted in the text, involves race. The other involves the impact of Democratic and Republican partisanship: partisans seem to know more about the partisanship of other groups and about election information generally, even though they are not especially well informed about other matters. This does not seem an important difference, however, since the left-out category in the analysis -- pure independents and apoliticals -- is a small one

Determinants of Political Information

	ELECTION INFO.†	FOREIGN INFO.	RACE INFO.	ECONOMIC INFO.	GROUP INFO.
Education (1-6)††	.24*	.28	.37	.24	.16
	(.04)**	(.04)	(.05)	(.04)	(.05)
	[.00]***	[.00]	[.00]	[.00]	[.00]
Male (0-1)	.56	.67	.37	.59	.45
	(.09)	(.09)	(.10)	(.10)	(.10)
	[.00]	[.00]	[.00]	[.00]	[.00]
Political Activity (0-5)	.20	.08	.07	.12	.13
	(.05)	(.05)	(.06)	(.06)	(.06)
	[.00]	[.16]	[.21]	[.03]	[.03]
Media Exposure (0-4)	.15	.13	.12	.05	.08
	(.05)	(.05)	(.05)	(.05)	(.05)
	[.00]	[.00]	[.02]	[.36]	[.13]
Interest in campaign (0-1)	.32	.15	.09	-.06	.10
	(.10)	(.10)	(.11)	(.11)	(.11)
	[.00]	[.15]	[.39]	[.61]	[.39]
Age (18-96)	.005	.005	.005	.015	.004
	(.002)	(.003)	(.003)	(.003)	(.003)
	[.05]	[.08]	[.06]	[.00]	[.19]
Income (1-22)	.014	.018	.017	.02	.03
	(.008)	(.009)	(.01)	(.009)	(.01)
	[.10]	[.04]	[.07]	[.03]	[.00]
Republican (0-1)	.48	-.04	.03	-.05	.36
	(.15)	(.16)	(.17)	(.16)	(.17)
	[.00]	[.80]	[.88]	[.76]	[.04]
Democrat (0-1)	.35	-.00	.14	-.03	.67
	(.15)	.16	(.17)	(.16)	(.17)
	[.02]	[.98]	[.39]	[.81]	[.00]
Liberal (self-id) (0-1)	.19	.27	.19	.03	-.02
	(.14)	(.14)	(.15)	(.15)	(.16)
	[.17]	[.06]	[.20]	[.84]	[.88]
Conservative (self-id) (0-1)	-.11	-.24	.06	-.02	-.26
	(.10)	(.11)	(.11)	(.11)	(.12)
	[.29]	[.02]	[.59]	[.89]	[.03]

TABLE CONTINUES

	ELECTION INFO.†	FOREIGN INFO.	RACE INFO.	ECONOMIC INFO.	GROUP INFO.
Black	-.07	-.43	.48	-.68	.19
(0-1)	(.17)	.18	(.19)	(.18)	(.20)
	[.69]	[.02]	[.01]	[.00]	[.33]
Housewife	.13	.19	.27	.01	.16
(0-1)	(.14)	(.15)	(.15)	(.15)	(.16)
	[.38]	[.20]	[.09]	[.93]	[.32]
Catholic	.15	.19	.14	.02	.23
(0-1)	(.11)	(.11)	(.12)	(.12)	(.12)
	[.16]	[.09]	[.22]	[.84]	[.06]
Hispanic	-.02	-.13	-.36	-.60	-.49
(0-1)	(-.03)	.26	(.27)	(.27)	(.29)
	[.92]	[.62]	[.19]	[.03]	[.09]
Adjusted R-square	.41	.36	.31	.34	.26

† All information scales have been standardized.

†† Figure in parentheses is range of variable.

* Unstandardized regression coefficient. Since the information scale has been standardized, each change of one unit on the education scale will be associated with a change of .24 standard deviations on the information scale.

** Standard error of coefficient.

*** Probability that the coefficient is different from zero at the .05 level of confidence.

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