NONATTITUDES: A REVIEW AND EVALUATION

In Surveying Subjective Phenomena, Charles F. Turner and Elizabeth Martin, eds. 1984

by

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Studies of voting behavior and other political matters in the fifties developed a picture of the American electorate that was startlingly at odds with the basic assumption of a rational citizenry as formulated in classic democratic theory. John Q. Voter was found to have (1) low levels of conceptualization with a limited and distorted ideological comprehension of issues and positions, (2) little information about procedural details of the government, the identity or party of office-holders, and topical issues of the moment, (3) minimal political participation with voting being the only political activity engaged in by a notable number of people, (4) weak attitude constraint with positions on related issues showing only low to moderate associations, and (5) low temporal consistency in issue positions. In general, the low or defective levels of conceptualization, information, participation, attitude constraint, and consistency were seen as indicating a very underdeveloped level of political thought and weak or disorganized political attitudes. In particular, inconsistency in attitudes over time was interpreted as indicating an abundance of nonattitudes.[1] That is, the data were interpreted to mean that on many issues many people (up to 80 percent in the extreme case) had no real position on a question and randomly chose a response in order to come up with an answer to the attitude question.

In this paper, we will review the literature on nonattitudes. We will examine how the concept of nonattitudes compares with rival explanations of mass belief systems and evaluate the conceptual and

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[1] "Constraint" refers to interim associations at one point in time. "Consistency/inconsistency" refers to across time associations. Consistency covers the combined effects of measurement error (reliability) and true change (stability).

empirical appropriateness of competing formulations. We will then consider the implications of these findings on survey design and analysis in general.

Converse's Nonattitudes

In the Survey Research Center (SRC) national election panel for 1956, 1958, and 1960, Philip Converse (1964, 1970, 1974, 1975, 1979) found low correlations between attitudes across waves of the survey (tau-betas of .3 to .5 for two-year intervals). Two things could cause this turnover in opinions: (a) true change and (b) measurement error. Converse rejected the true change explanation since (1) the marginal shifts were minimal, indicating that the massive individual conversions must have almost perfectly balanced out to produce next to zero net change, (2) the four-year correlations were typically as high as the two-year correlations indicating that time was not related to the switches (or at least not in a presupposed linear fashion), and (3) an alternative measurement error model better described the data. Converse found that a "black-and-white" model with extreme but intriguing assumptions could fit the data. This model assumed that there was no true change. Looking at the 1956 and 1958 waves, Converse empirically distinguished a group that changed sides and a consistent group. He supposed that all changers were people without any true position on the issue who were simply guessing or randomly selecting a position each time. The consistent group was made up of two distinct types, a random group without real attitudes who had simply selected the same response twice by chance and a group of people with real and unchanging attitudes. Converse reasoned that between the second and third waves (1958 to 1960), the group that had changed sides from the first to the second wave (1956 to 1958) should

show no correlation since their responses were random. The group that was consistent in the first two waves would have a correlation that would be an average of its random subgroup (with zero correlation) and its consistent subgroup (with a perfect correlation). On one item (power and housing) Converse's black-and-white model almost perfectly predicted the actual correlations and on the others the fit was close enough to suggest that a relatively minor third force of true change was also at work.

Converse further argued that the random change was a function of respondents who did not have any attitude, giving meaningless and essentially random or, at best, labile and ephemeral responses in order to either hide their ignorance, give the interviewer what she wanted, or otherwise fulfill the perceived obligation of supplying a substantive response. He did not see the measurement error as coming from the questions themselves in the sense of shoddy wording. He pointed out that the questions had a face comprehensibility, that the same question-writing team that had successfully developed consistent (and therefore reliable) measures for other areas had probably not suddenly become incompetent in framing questions in the area of public policy, and that elites had managed to have substantially high constraint "even when asked to respond to the very same simplistic issue items."[1] Instead, he saw the measurement

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[1] Converse (1979, p. 43). For the United States, Converse is referring to the 1958 study of Congressional candidates. His point is on weak ground since he has no panel data on this group and is inferring higher reliabilities from their higher level of constraint. Also, the questions asked of the elites were not identical to the cross-section items but were often notably different. See also Converse, 1964, pp. 228-229. Converse does, however, have panel data from France for both elites and the general population with some identical questions and cross-sectional elite/general samples with identical questions from Brazil.

error as coming from an interaction between the substance of the questions and nonattitudes towards these issues by a large segment of the mass public.

To this group of hidden nonattitudes Converse added a second group of "self-confessed" nonattitudes (1975, p. 62). This group consisted of respondents who did not take sides on an issue on one or more of the three waves. Self-confessions vary from the hidden nonattitudes in that respondents did not feel compelled to manufacture a substantive response to cover their lack of affect towards an issue, but freely admitted their nonattitude. Except for this distinction, these groups are considered as similar blocks of nonattitude holders by Converse.

As Converse summed it up:

> (L)arge portions of an electorate do not have meaningful beliefs even on issues that have formed the basis for intense political controversy among elites for substantial periods of time. 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. (Converse, 1964, p. 245.)[1]

Converse and colleagues (Dreyer, 1973 and Asher, 1974b) also stipulated various attributes of people, questions, and issues that would lead to low consistency. These are outlined below:

Associates of High Consistency

I. Attributes of People

1. High education[2]
2. High partisan activity
3. High political interest
4. Political elite
5. High ideological development

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[1]For even more negative evaluations of public attitude formation, see Markel, 1972, p. 32 and Hennessey, 1970, p. 471.

[2]Converse later (1975, 1980) downplays this association.

I. Attributes of People (Continued)

6. High political attentiveness
7. High attitude integration/constraint
8. High political information

II. Attributes of the Question

1. Non-ideological
2. Close to everyday life
3. Coherent, non-shoddy wording
4. Focuses on socially visible group

III. Attributes of the Issue

1. Crystallized
2. Centrality (cognitive and motivational)
3. Salience
4. Importance
5. Intensity

IV. Other Indicators

1. Low proportion Don't Know
2. High inter-item reliability

In brief, this literature argues that certain types of people who are politically aware tend to have low levels of nonattitudes and more consistent attitudes. Also, questions that are simple to understand, concrete, and technically adequate will tend to have less item-based measurement error, smaller numbers of people with nonattitudes, and therefore high consistency. Finally, issues that are salient and important to the public, central to their political thoughts, and crystallized will have a high level of genuine attitudes and high consistency. The general political awareness of an individual and the clarity and concreteness of the item influence the general propensity of the item to be consistent but on the individual level it essentially depends on whether a particular issue is salient and important to the respondent, crystallized in his thoughts and occupying a position of centrality.[1] If an issue

[1]Modigliani and Gamson (1979) specify three hierarchical branching that can lead to non-attitudes: inattention, non-assimilation, and disorientation.

is crystallized and central to a particular individual's thoughts, then it will be consistent regardless of the fact that he may be uneducated, uninformed, and/or apathetic and that the question is imperfect (Arrington, 1976).

Instrument Error

Converse's evaluation of the panel data and the prevalence of nonattitudes have been challenged by a number of investigators. They contend that instrument unreliability rather than nonattitudes was the cause of the low correlations. John C. Pierce and Douglas D. Rose (1974) argued that the variation that Converse studies was mainly fluctuations in responses only. The underlying attitude was stable and the variation in responses reflected (1) temporal influences that (a) did "not raise the level of inconsistency over the threshold and (b) continue to reflect the basic underlying predisposition; and (2) instrument-related variations reflecting both the instrument's and the individual's inability to discriminate the individual's precise affect" (Pierce and Rose, 1974, p. 629).

Similarly, Christopher H. Achen (1975, p. 1229) reexamined the 1956-58-60 panel data and concluded, "Measurement error is primarily a fault of the instruments not the respondents" (see comments of Stephens, 1976; Arrington, 1976; Hunter and Coggin, 1976; and rebuttal of Achen, 1976). Recently, Robert S. Erikson subjected the panel data to yet another reanalysis and decided, "The evidence forces us to reject a literal interpretation of the black-and-white model" (1979, p. 104).

While differing in particulars each of these and other evaluations found instrument error rather than nonattitudes was the source of the measurement error and inconsistency. All of the instrument error

interpretations share Converse's dismissal of true change as an explanation for the inconsistency. In the following section we will analyze the nonattitude, instrument error, and true change explanations and consider their plausibility.[1]

To evaluate the competing explanations we will consider (1) how the concepts of attitudes and nonattitudes are used, (2) ancillary evidence for hidden nonattitudes, (3) whether item nonresponse is equivalent to "self-confessed" nonattitudes, (4) how hidden nonattitudes might be distributed, (5) whether hidden and self-confessed nonattitudes show a pattern of correlation as Converse predicted, and (6) evidence of instrument error among the election panel questions.

Concepts

There does not seem to be any basic difference among the various authors about the definition of attitudes and all would appear to be comfortable with Thurstone's characterizations of an attitude "as the intensity of positive or negative affect for or against a psychological object. A psychological object is any symbol, person, phrase, slogan, or idea toward which people differ as regards positive or negative affect" (Thurstone, 1946, p. 39). Pierce and Rose, however, draw a sharp distinction between the underlying attitude itself and surface measurements

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[1] Among two relevant but neutral studies, Leo Bogart (1967) agrees with Converse that many people lack meaningful attitudes on many issues. He also agrees people may have complex attitudes that do not fit well into response categories which is similar to points raised by Pierce and Rose. Robert G. Lehnen (1971-72) found a correspondence between inter-item reliability and how Converse found items ranked on consistency but did not choose between the nonattitude and shoddy question explanations. As he wrote, "Such a pattern . . . suggests either a faulty measurement approach to some policy areas or the existence of attitudes among mass publics are not only unstable over the long run but may also suffer from instability over the short run" (Lehnen, 1971-72, p. 590).

of the same. They contend that respondents' attitudes are generally inert but the expressions of their attitudes (i.e., their recorded responses) are quite variable. This response variation occurs because of "short-term, temporal influences, of which there are several types (psychological, social, physical) which contribute to a dispersal of the response around the position of the real attitude" and "instrument-related variations reflecting both the instrument's and the individual's inability to discriminate the individual's precise affect" (1974, p. 629). They go on to argue that neither true change nor nonattitudes are indicated by temporal inconsistency since this variability can be explained by response variation around meaningful and stable attitudes.

While their distinction between attitudes and responses is quite valid, they err in assuming a great disparity between the two with the former being real and stable and the latter being artificial and labile. Their two explanations for response variation, temporal instability and instrument error, undoubtedly cause variation but there is little reason to believe that they are the only sources of variation. If one accepts a sharp distinction between real and stable attitudes and mere responses, then observed variability is accepted as proof that responses are varying around underlying attitudes and instrument and observation-related errors like those above become accepted as sufficient explanations for the observed variation.

A second and related problem arises over the concept of nonattitudes. It is unclear just how vacuous a response has to be to qualify as a nonattitude. Converse seems to describe them as devoid of redeeming intellectual value. He variously categorizes them as "capricious constructions," "meaningless opinions that vary randomly," "no belief at all," "hastily fabricated affective judgments," "very ad hoc feelings,"

and "haphazardly chosen alternatives." This obviously includes those who have no idea what the question refers to and those who comprehend the topic but have no affect towards it. It would also apparently include those with no prior affect towards the issue but who comprehend it and take a position that truly reflects their spontaneous opinion. Whether the concept goes further to include people with some prior affect but with only weak or confused thoughts on the issue is unsure.

The vagueness and gradients of what does and does not constitute a nonattitude are in stark contrast to the black-and-white formulation which breaks respondents into heterogeneous groups, perfectly consistent attitude holders and randomly responding nonattitude holders. We see, however, that it is not clear just where the line between nonattitudes and attitudes falls and that within both nonattitudes and attitudes there are different subgroups. Among other things, this suggests that there is actually a continuum of attitudes/nonattitudes and that the black-and-white model tends to obscure this by using rigidly distinct groups.

In the relationship of attitudes to responses and nonattitudes to attitudes, there has been a tendency to establish sharp distinctions between categories where there are really only blurs. There is also a danger of having the definition of the problem and concepts preordain the conclusions. This has lead in some cases to a simplified and restricted analysis of the structure of attitudes and errors.

Are There Hidden Nonattitudes?

In support of his conclusion that there are a great deal of hidden nonattitudes secreted away amongst the substantive responses, Converse relates personal interviewing experience where respondents

indicated either implicitly or explicitly that the responses were largely meaningless and were being supplied just as a courtesy to the interviewer or to avoid the appearance of ignorance (1974, p. 650). While Converse's account is illustrative and anecdotal and not presented as real proof of nonattitudes, it does present one mechanism, interviewer evaluation, by which response could be systematically evaluated. General interview evaluations of such things as comprehension and cooperation are fairly common and even evaluations of individual questions are occasionally done, but we do not know of any literature that analyzes these data and relates them to the issue of nonattitudes.

There are, however, other ancillary bodies of literature that do bear on the existence and prevalence of hidden nonattitudes. These include the literature on (1) nonresponse, (2) knowledge, (3) fictive questions, (4) validation, and (5) response error. Each of these has some relevance to the hidden nonattitude hypothesis.

The "don't know" literature (Bogart, 1967; Crespi, 1948; Schettler, 1960; Erikson and Luttbeg , 1973; and Hennessey, 1975) agrees that there is a notable amount of nonattitudes disguised as opinion.[1] Apparently many people are loathe to reply "don't know" since it implies ignorance or indecision. While there is actually little hard data on this point, work by Howard Schuman and Stanley Presser shows that when an explicit "don't know" response is offered the proportion selecting it rises substantially, typically 20-25 percentage points (Schuman and Presser, 1978). A similar experiment on the 1978 General Social Survey found that the percent DK on a self-ranking conservatism/liberalism scale

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[1]We will use "don't know/DK" as our generic term for nonsubstantive responses. NORC and SRC tend to use this term while AIPO favors "no opinion" and Harris uses "not sure" most frequently. They are also referred to as item nonresponse and nonsubstantive response.

was 4.7 percent when no "DK" was mentioned and 22.4 percent when an explicit DK option was offered. In brief, the literature in general and empirical studies agree that the level of "don't knows" reported in surveys substantially underestimates the true level of these responses.

The knowledge literature (Bogart, 1967; Merkel, 1972; Farber, 1956; Erikson et al., 1980; Payne, 1951; Smith, 1970; Erskine, 1963a, 1963b, 1963c; Hyman et al., 1975) finds that DKs are typically much higher on knowledge questions than opinion questions. Farber (1956), in an adult sample of Champaign-Urbana, found that between 60 to 80 percent were either uninformed (didn't know) or misinformed (gave wrong answer) about basic facts concerning four attitude items. Gallup (1978, p. 1176), in a national sample, found that while 96 percent had an opinion on the importance of a balanced budget, 25 percent did not know whether the budget was currently balanced, 8 percent wrongly thought that it was balanced, 40 percent knew it was unbalanced but didn't know by how much, 25 percent knew it was unbalanced but over- or underestimated the amount by 15 percent or more, and 3 percent knew it was unbalanced and knew the approximate level of the deficit ($\pm$ 15 percent). This suggests that many people are either "guessing" their opinion or have such low levels of factual understanding that a "don't know" response rather than a substantive response to the opinion item might seem more appropriate.[1]

Farber goes on to show that those unknowledgeable about an issue nevertheless frequently express opinions about the issue. The misinformed had opinions just as frequently as the informed while many of those

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[1]There are several ways that opinion and knowledge questions can interact. The following table shows the basic association.

(Continued)

either unable to define reference terms or not knowing a basic (but not necessarily essential) fact about an issue expressed an opinion (14 to 47 percent of those unable to define a term used in a question had an opinion and 62 to 83 percent not knowing a basic fact had an opinion).

Gallup also found that knowledge was lower for those who thought a balanced budget was an important issue. Among those who thought a balanced budget was very important, 65 percent knew it was unbalanced; among those who thought it was fairly important, 72 percent knew it

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(Continued)

Issue Knowledge by Opinion

		Opinion	
		Has One	Does not have one (Don't Know)
Knowledge	Correct	A	B
	Don't Know	C	D
	Incorrect	E	F

1. In A respondent is knowledgeable and has an opinion about the issue.
2. In B the respondent is knowledgeable but does not have an opinion.
3. In C the respondent is unsure about the facts but has an opinion.
4. In D the respondent is unsure of both the facts and his position on the issue.
5. In E the respondent is misinformed and opinionated.
6. In F the respondent is misinformed and unopinionated.

If we take all responses as sincere then the misinformed truly thought they knew the facts and those with opinions actually have some at least minimally intelligent position on the issue. The problem is mudded, however, by the fact that we cannot assume sincerity, but must assume there is a predisposition for the uninformed to offer an opinion. There may also be a tendency for the consciously unknowledgeable to guess at the facts, but presumably the possibility of disclosing their ignorance by giving an incorrect response diminishes this. Because of this we assume that the consciously unknowledgeable will be more inclined to admit their ignorance by saying "don't know" than will the unopinionated. This being the case, we would expect that a higher level of DKs on the knowledge questions than on the opinion questions would partly point to a quantity of nonattitudes hiding among the substantive attitude responses.

was unbalanced, and among those who did not think it was important, 85 percent knew it was unbalanced. It almost seems that the less one knew about the issue the more important (mysterious?) one considered the issue. The causal connection was probably more subtle than that, however. Perhaps those without affect towards or knowledge about budgets saw "importance" as the desirable or proper response.

It is simplistically tempting to take lack of correct knowledge as indicative of hidden nonattitudes among the opinionated but uninformed. Generally speaking, there is probably a positive correlation between knowledge and attitude holding. The association is not perfect however. Presumably, to have an opinion on an issue there is a certain minimum of essential information which is needed. But specifying just what is essential is difficult. For example, to respond to a question on increasing the minimum wage it would seem essential to know what the term "minimum wage" refers to. It might also seem important to have an idea of what the current minimum wage is, but actually this basic fact is not necessarily essential. A free market conservative could say "no" without knowing the actual wage rate because he opposes a minimum wage in principle. A social welfare liberal, on the other hand, could say "yes" because he "knows" the rate is too low (without knowing just what it actually is) or because he figures an increase in the minimum wage would redistribute income, which he favors. In fact, in an extreme case, a staunch conservative could reject an increase without knowing even what the "minimum wage" referred to if he knew only that it was a "socialist" program or that "increase" implied more government involvement. Of course, as we mention in the discussion of fictive questions, in this extreme circumstance, it may be fair to say that there is only an attitude towards government or spending and not one on the increase

of the minimum wage. Despite this imperfect interface, knowledge does relate to the quality of attitudes and a lack of knowledge may well indicate hidden nonattitudes.

In brief, the knowledge literature suggest that either nonattitudes or factually impoverished attitudes are common. Because of the imperfect relationship between knowledge and attitudes, it is impossible to tell whether unknowledgeable respondents are manufacturing attitudes (non-attitudes) or have true affect but severely limited factual support for that affect.

Other evidence on nonattitudes comes from the fictitious question literature. Student, community, and national samples have shown a common tendency for people to answer questions about fictitious or extremely obscure issues and subjects as if they were real and familiar (Kolson and Green, 1970; Ehrlich, 1964; Hartley, 1946; Bennett, 1975; Schuman and Presser, 1980; Patterson, 1972; Gill, 1947; Bishop et al., 1980; and Ehrlich and Rinehart, 1965). Schuman and Presser (1980) found that on a question about two extremely obscure pieces of legislation, 26 to 31 percent of a national sample offered opinions. Bishop et al. (1980) found that 33 percent of a Cincinnati area sample took sides on a fictive piece of legislation. In other studies, student samples frequently rated fictional persons or ethnic groups and answered nonsensical questions. In all of these cases it was impossible (or nearly impossible in the case of extremely obscure references) to have a meaningful attitude about the object or issue at hand. Opinions represented either (1) mistaken identity where a respondent honestly and unknowingly confused the false reference with a real object, (2) imputed meaning where the respondent (a) thought the reference was real, (b) did not know what it referred to directly, but (c) imputed a meaning from clues

in the question and general predispositions, and (3) disguised ignorance where a respondent (a) thought the reference was real, (b) did not understand the import of the questions, so (c) the respondent blindly chose a response to avoid replying "don't know." While these three patterns are of course not rigorously distinct nor exhaustive, they probably represent the three most common reasons for giving substantive responses to fictitious questions.

Schuman and Presser (1980), Bishop and others (1980), and Hartley (1946) all show that many of the false answers result from imputation. Respondents read meaning into the question and answer in terms of some general predisposition towards the economy, the government, or tolerance. In one sense, when people rely on such a predisposition they are showing ideological or constrained attitudes since they are using general attitudes to supply responses to specific questions. On the Monetary Control Act example of Schuman and Presser, many of the tricked respondents were applying something like the following syllogism: Major Premise: I support programs to curb inflation. Minor Premise: The Monetary Control Act is a program to curb inflation. Conclusion: I support the Monetary Control Act. The problem is that the minor premise which they imputed from the bill's name is wrong since the Monetary Control Act actually deals with bank regulations. Other qualitative evidence from this literature suggests that strict cases of mistaken identity (with real bills, people, or groups) are rare. Other respondents apparently chose an answer without any regard to the subject of the question although they may be influenced by the response categories in the form of positivity or playing it safe response effects (Kolson and Green, 1970).

The fictive question literature shows a common tendency to over-respond to questions, to impute or even conjure up answers. This is obviously similar to Converse's concept of hidden nonattitudes. There are some notable differences, however. Nonattitudes on the fictive questions are not distributed randomly, but are the result, in many instances, of imputations. The nonattitudes on the fictive questions can be correlated with other attitude items and would presumably show some consistency (correlated error in a sense) across time. In brief, the fictive question literature suggests that hidden nonattitudes are fairly common, but many of these nonattitudes are not random as Converse's model supposes.

Fourth, data on validation finds evidence of a pattern of response alteration to a social desirability effect that is similar to the process that supposedly generates many nonattitudes. This literature indicates that good behaviors or conditions are overreported (voting, registration, having a library card) while bad attributes (bankruptcy, drunken driving) are underreported (Bell and Buchman, 1966; Traugott and Katosh, 1979; Bradburn and Sudman et al., 1979; and DeMaio, 1980). Of course, the items verifiable through record checks are distinctly different from attitudes since they are objective, concrete facts rather than personal affects, yet it is reasonable to suppose that a similar desirability effect could cause people to give substantive responses (the good) and avoid disclosing nonattitudes (the bad). Of course, this is not the only way that social desirability might interact with nonattitudes. Unpopular or impolite opinions (racist opinions held by a white being interviewed by a black, for example) might be transmuted into a DK as a "half-way" social desirability effect. The relationships are outlined below where we have an attitude with three responses:

YES, DK, and NO. We assume that "YES" is the undesirable substantive response and "NO" is the desirable substantive response.

True Opinion	Desirability of Opinion	Given Opinion	Characterization
YES	Very undesirable	1. Yes	nonconformist
		2. DK	false DK, "half way" social desirability
		3. No	false conformist
DK	Somewhat undesirable	4. Yes	false nonconformist
		5. DK	self-confessed nonattitude/ ambivalent
		6. No	false conformist
NO	Desirable	7. Yes	false nonconformist
		8. DK	false DK
		9. No	conformist

In this example, outcomes 7 and 8 should be nil (except for something like transference error--e.g., keypunching). Outcome 6 will be followed by those randomly choosing this substantive response plus those nonattitude holders who grapse the question enough to perceive that this is the socially preferred response even though they have no opinion of the matter. Outcome 4 would presumably be taken only by the random nonattitude holder since if the issue was understood, one would then avoid covering up his somewhat undesirable nonattitude by expressing an even more undesirable substantive opinion. (In effect the uncomprehending DK does not recognize that "yes" is less desirable than DK for this question. Not comprehending the question enough to recognize the undesirability of a "yes" response, the uncomprehending DK applies the general rule that it is more desirable to have an opinion than not to have one and picks unreflectively between the two substantive positions.) In outcomes 2 and 3 the nonconformist hides this undesirable opinion by switching to either DK or no.

The net impact would be that the observed number of "no's" would be greater than the true number while the observed number of "yes's"

would be less than the true number. It is uncertain, however, whether the observed number of DKs would be greater or lesser than the true number. The number of observed DKs would be reduced by the loss of respondents expressing an opinion to disguise their lack of opinion, but increased by the "half-way" social desirability effect as those holding the undesirable position reduce social disapproval by opting for the relatively less undesirable DK position. Presumably, if the number of people with a nonconformist position was substantial and the social desirability effect was strong, then many would disguise their position by replying DK or "no." If the number of nonconformists was small and the social desirability effect was slight, then few would change position to DK or "no." In the first case, the number of observed DKs might easily exceed the true number, while in the latter case the opposite would probably prevail. In sum, we see that the validation literature supports the notion that respondents will disguise their true state by giving more socially desirable responses, but at least where a strong social desirability effect applies to the substantive responses it is uncertain whether the observed number of DKs would be higher or lower than the true number.

Finally, response effects such as context, balance, or response options may indicate the existence of nonattitudes. On one hand, these response errors represent instrument errors. It is commonly assumed in the survey literature that these factors can not work their havoc or at least have a diminished impact if attitudes are crystallized (Converse, 1970, p. 177; Payne, 1951, pp. 135, 179; Erikson et al., 1980, p. 29; Hovland, Harvey, and Sherif, 1957; Schuman and Presser, forthcoming). Thus the evidence of these types of response errors may also be indicative of either weakly integrated, uncrystallized attitudes

or perhaps nonattitudes as we cross that hazy line. However, not all types of nonattitudes will be influenced by response effects. In the extreme case in which there is no comprehension or comprehension but absolutely no affect, then a substantive context effect would presumably have no impact since the respondent answers each question independently by equiprobability guessing or some biased random selection process. Nothing so substantive as a context effect would bother this person's selection process. In the case of an ad hoc affect just the opposite situation would apply. Presumably the context question might be a major factor in establishing a frame of reference that would in turn help to form the ad hoc affect on the subsequent related question (Stember, 1951-52). This divergent response of nonattitudes to response effects of course makes it hard to clearly relate these two features.

It could be that such things as context effects are created not by people with nonattitudes but because of measurement error in the subsequent question. Perhaps for a vague question, people rely more on the preceding question to help resolve the vagueness and supply an answer. If a measurement error is correlated with attributes of the respondent then, to at least some extent, the measurement error is no longer just instrument error but is partly respondent measurement error. The distinction between nonattitude error and instrument error becomes hard to sustain. If a context effect or response set is greater for the less educated this could be because the less educated are more likely to be nonattitude holders. It could also be because the less educated are more likely to have their attitudes distorted (modified?) by extraneous effects. But even if we lean towards the second option, the question is whether the greater susceptibility to the response effects of the less educated is completely unrelated to their attitude. If they have

less crystallized attitudes or less integration of attitudes then (1) their attitudes might be more susceptible to response effects and (2) we have just about gotten back to nonattitudes as the cause of the response effect differential. If their attitude has the same quality as the better educated, but the less educated are more easily dissuaded because of some factor unrelated to the attitude in question, (1) inarticulateness, (2) poor vocabulary, (3) disattentiveness, etc., then the measurement error is an interaction of instrument and respondent error, but nonattitudes have no role.

Traditionally, it was commonly supposed that most types of measurement error would be higher for the less educated, less politically involved, uninformed, in general, those with less crystallized attitudes. Unfortunately these expectations, while based on a reasonable theory, had very little empirical evidence to support them. Recent work by Schuman and Presser finds that more often than not response effects do not interact with these types of respondent attributes. When an interaction does occur, however, it is typically found to be in the hypothesized direction. It is difficult from the evidence at hand to determine whether the occasional interactions are because of an attitude-related factor or because of more generalized factors not related to specific attitudes. The fact that Schuman and Presser find that counter argument questions tend to show interactions with education (with the less educated being more influenced by the introduction of an explicit argument) does suggest that magnitude of the response effect may be related to the presence or quality of the attitude being measured. In sum, while traditional expectations suggest a relationship between response effects, such as context, and nonattitudes, the ambiguous relationship of response effects to types of nonattitudes, the mixed empirical results, and the alternative

explanations for the associations make it difficult to draw any definitive connection between the two.

In reviewing ancillary evidence for support for Converse's concept of hidden nonattitudes, we found various support for the idea that a substantial number of substantive responses might really represent nonattitudes. The DK, fictive question, and knowledge literature all indicated that people tend to give substantive responses even when they have little or no interest in the question, are only guessing at the meaning of the question, or lack knowledge about basic facts about the question. These pieces do not indicate that nonattitudes are the sole root of the problem, however.

The validation literature demonstrates that there may be a social desirability effect similar to that supposed for nonattitudes working in related areas, but also suggests that DKs can include a non-trivial number of people who really have attitudes. The response effect literature turns out to be too ambiguous in both theory and empirical results to shed much light on the matter. The net conclusion, however, must be that these various areas present substantial support for the notion of hidden nonattitudes while sometimes suggesting that nonattitudes may not be simply random and that there might be a continuum between nonattitudes; labile, unstructured attitudes; and crystallized attitudes rather than any sharp separation.

Are DKs Nonattitudes?

In our earlier discussion of DKs, we found that among substantive responses there were hidden nonattitudes. We now examine whether among DKs ("self-confessed nonattitudes") there are attitude holders. Researchers commonly distinguish between DKs that mean that the respondent has no position on the issue (a nonattitude case) and DKs that indicate the

respondent can't choose between the alternatives (an ambivalent case).[1] In the first case the respondent has no place on the attitude continuum, but in the latter he is at the midpoint. Evidence on the relative size of these two categories suggests that both types are substantial. Faulkenberry and Mason (1978) had interviewers in their national survey on wind energy code DK as being either a nonattitude or ambivalent and found 45.2 percent of the DKs were ambivalent. Coombs and Coombs (1976), with a sample of Taiwanese women ages 20 to 40 found that based on an analysis of answers to a six-item abortion scale "75.5 percent of all DK responses are scale dependent ("ambivalent") in the sense of being accounted for by admissible scale patterns" (p. 509). Ehrlich (1964) found in a sample of American college students 80.4 percent not expressing substantive positions on issues selected an ambivalent nonresponse category over a nonattitude alternative. Dunnette and others (1956) in a sample from nine unions reported that nonresponse split 50/50 between ambivalent and nonattitude categories.

Actually, some of the most complete information comes from the SRC election studies. In the 1956 survey there were fifteen attitude questions that follow the following introduction:

> Around election time people talk about different things that our government in Washington is doing or should be doing. Now I would like to talk to you about some of the things that our government might do. Of course, different things are important to different people, so we don't expect everyone to have an opinion about all of these.
>
> Q. 12. I would like you to look at this card as I read each question and tell me how you feel about the question. If you don't have an

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[1] These are classified by various investigators as "nonopinion" vs. "no opinion" (Faulkenberry and Mason, 1978), "item ambiguity" vs. "scale dependent" (Coombs and Coombs, 1976); "ignorance" vs. "ambivalence" or "informed indecision" (Schuman and Presser, 1978) "a lack of essential information" vs. "a lack of decision" (Zeisel, 1968), and, in a slightly different context, as "apathetic" vs. "ambivalent" (Goldenson, 1979).

opinion, just tell me that; if you do have an opinion, choose one of the other answers.

Q. 12a. "The government ought to cut taxes even if it means putting off some important things that need to be done." Now, would you say you have an opinion on this or not? (IF "YES"): Do you agree that the government should do this or do you think the government should not do it?

The card listed five categories: agree strongly; agree but not very strongly; not sure, it depends; disagree but not very strongly; and disagree strongly. In addition to these five categories, responses were also coded as "no opinion" and as "DK." Clearly the "not sure, it depends" response indicates an ambivalent answer. "No opinion" corresponds to not having an opinion. "DK" is a bit unclear. It appears to refer to people with an opinion who "don't know" what it is. These results show that an average of .605 of the nonsubstantive responses were nonattitudes, .342 were ambivalent, and .054 were the ambiguous "DKs."

In the 1960 survey, eight attitude questions were coded in a similar format with the same five response categories but with an explicit screen for no opinion in addition to a general introductory statement:

Around election time people talk about different things that our government in Washington is doing or should be doing. Now I would like to talk to you about some of the things that our government might do. Of course, different things are important to different people, so we don't expect everyone to have an opinion about all of these.

Q. 17 and 17A. "The government should leave things like electric power and housing for private businessmen to handle." Do you have any opinion on this or not. (If Yes) Do you think the government should leave things like this to private business.

The average results showed fewer nonattitudes than in 1956 (.533), more ambivalent response (.408), and the same level of ambiguous "DKs" (.059).[1]

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[1]The difference was smaller if we compared only the eight items common to both surveys (.573 nonattitudes in 1956 vs. .533 in 1960).

It is clear, however, from both sets of SRC data that ambivalent responses are common and may on average account for one-third to one-half of all nonsubstantive responses. In brief, the evidence indicates that a substantial share of nonresponse are ambivalent attitudes rather than nonattitudes.[1]

In addition, there are numerous other reasons why respondents might give DKs rather than the two commonly listed. These include (1) concealing one's opinion out of a sense of privacy, (2) failing to assert one's opinion because of a lack of confidence, shyness, or related, (3) trying to be inoffensive or polite (a half-way social desirability effect, see above), (4) attempting to avoid subsidiary questions and rush completion of the interview (this strategy would not work if "DKs" were heavily probed), or (5) seizing a temporary expression of uncertainty while respondent collects thoughts and mulls over the issue. Virtually nothing is known about these DKs but presumably some of the DKs customarily thought of as reflecting nonattitudes or ambivalence really stem from such unrelated causes as these. In sum, while numerous nonattitudes are disguised among the opinionated, there are also among the DKs many that are not nonattitudes.

Converse is aware of the difference between nonattitudes and ambivalent responses (1970, pp. 179-180), but in his handling of the black-white model he treats all nonresponses as nonattitudes.[2] The

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[1] There is, however, a type of ambivalent attitude that might be akin to a nonattitude. If an issue is salient to and understood by a respondent but he is so torn by conflicting arguments and/or cross-cutting pressures that he does not know what he thinks about the issue or whether he favors one side or a middle course, he may be treated as off the continuum.

[2] Converse's ambivalence towards this group appears when he repeatedly refers to there being 29 to 36 percent nonattitudes on the power and housing question, the range being the undecided category. In the black-white model, the "undecideds" are handled as nonattitudes, or in application the 36 percent figure wins out (1974, pp. 651, 656).

undecideds, however, do not fit the concept of nonattitudes since they are located on the affect continuum and do not behave like nonattitude holders. Looking at the 1956-58-60 SRC panel data, we find that the undecided group has notably more political involvement and education than the nonattitude group.[1] We examined the level of political activity (six item scale), voting history, and interest in politics, and found that in both 1956 and 1958 on both the power and housing and the school integration questions the undecided group had distinctly more political involvement than the nonattitude group. For example, in 1958 16 percent of the nonattitude group on power and housing were very interested in politics while 29 percent of the undecided group were. Similarly, only 4.3 percent of the nonattitude holders were college educated while 23.0 percent of the undecideds were. In brief, the undecided group is not only conceptually distinct, but differs from the nonattitude group in its political involvement and education.

In sum, DKs are not merely self-confessed nonattitudes but contain a variety of attitudes, especially ambivalent responses. Because of this, DKs can not be simply treated as off-scale nonattitudes and excluded nor placed in a middle category as ambivalent responses. DKs arise from complex causes and must be treated in a complex manner.

Distribution of Hidden Nonattitudes

Converse states that hidden nonattitude holders will randomly choose between response categories with little or no regard for their substance. When Pierce and Rose showed that a random equiprobable

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[1] The undecided group tends to have somewhat lower political involvement than the consistent group, but is closer to them than to the nonattitude holders. The small "DK" group tends to be between the nonattitude and undecided groups, but there are too few cases in this group for confident analysis.

distribution on nonattitudes was at variance with the observed distributions, Converse clarified his earlier remarks by noting that equiprobability was not a necessary attribute of randomness and suggested a biased coin model instead. We reviewed the literature on "random" responding and found five models offered to explain the distribution of nonattitude-like responses. The equiprobability model has the respondent distribute his responses equally among each category. The playing-it-safe model has respondents favoring a middle or neutral response as the safest or least offensive response (Farber, 1956; Rogers et al., 1967; Brim, 1955; Ehrlich, 1964; and Schuman and Presser, 1978). The positivity response set model suggests that respondents will favor a positive response over a negative (Berg and Rapaport, 1954; Kolson and Green, 1970; and Ehrlich, 1964). The social desirability model has the respondent trying to guess or impute the proper answer (Phillips and Clancy, 1972). This might be proper in the sense of the correct answers, the answer supplied by the majority, or the answer that the interviewer wants. Finally, the imputed understanding model has respondents taking "clues" in the question to supply meaning and then answering the question according to a predisposition towards the perceived meaning (Hartley, 1946; Bishop et al., 1980; and Schuman and Presser, 1980).[1] In the equiprobable, playing-it-safe, and positivity response set models, the respondents need not have any understanding of the import of the question. In the social desirability model they understand the question

[1] Respondents who are forced to choose between equivalent alternatives are found not to randomize their responses but to make choices that are correlated with their attitude towards the task being evaluated (Fischhoff, 1980 and Slovic, 1975). The relevance of this research is problematic since it represents an ambivalent situation rather than nonattitudes and it posits some knowledge about and a real attitude towards the task under evaluation.

but have no affect towards it. In the imputed understanding model they think they decipher the meaning and have an affect towards that imputed meaning.

The results make clear that various demonstrated effects are tendencies and not uniform, homogenous outcomes. Furthermore, each of these models has some face sensibility and empirical support. The implications for the distribution of hidden nonattitudes both cross-sectionally and longitudinally are quite different. The equiprobable model would produce a high level of turnover that would be predictable in the aggregate. A biased coin version of the positivity response set or middle alternative models would produce less turnover but would still be known in the aggregate. If, however, we assumed that some people would be consistently influenced by the positive or safe responses and that the remainder were deciding by an equiprobable method, the level of turnover would be even less and hard to predict even in the aggregate. For social desirability and imputed understanding, there might be even less change if respondents interpreted the meaning or social desirability clues consistently as Schuman and Presser's work on obscure opinion suggests (forthcoming). Since each of these models probably operates to some extent and their relative contributions vary across items, context, and other variables, it would be quite difficult to assess how nonattitude responses would be distributed and impossible to anticipate their distribution over multiple waves. Assumptions of random distribution, even a bias coin effect, are too simplistic to describe most actual situations.

Correlates of Nonattitudes

Several tests have been made to see if the hidden and self-confessed nonattitudes behave as Converse and colleagues argue or whether

the instrument error explanation better fits the data. The three main tests are (1) whether the nonattitude holders show inter-item attitude constraint, (2) whether the nonattitude holders have a background profile that is related to attitude holding, and (3) whether nonattitude holders have temporal consistency. For the self-confessed nonattitude holders the tests check to see if this group behaves in a manner consistent with the nonattitude hypothesis. For the hidden nonattitude holder the question is whether the black-and-white method of identifying this group (changing sides on the issue between time 1 and 2) actually specifies a group that behaves like nonattitude holders.

In Converse's formulation, nonattitude holders are concentrated among people with a low level of political involvement, little interest in political matters, and less education. In support for his position he noted that among "very limited sets of people . . . who had shown 'self-starting' concern about particular controversies" on certain open-ended questions, the consistency correlations were substantially higher "beginning to approach levels of stability for party identification . . ." (Converse, 1964, pp. 244-245). In later reanalysis, Converse looked at the association between more general groups and consistency. He found that the better educated were more consistent, but the differences were "quite trifling." He did find, however, that "partisan activists showed notably higher levels of stability in their responses to these issues over time than did persons less engaged in the political process" (1975, pp. 103-104). Achen (1974) and Erikson (1979), however, looked at the association between consistency and such indicators as political concern, political interest, education, SES, voting, political activity, mass media attention, and political knowledge and found no relationship.

We carried out a similar analysis of the 1956-58-60 panel data and came up with essentially the same conclusion as Achen and Erikson. Because of the lack of details about the data that Converse used, we were unable to attempt to replicate his findings, but we did work with many of the variables employed by Erikson and Achen which presumably overlapped with those that Converse used to specify his "partisan activists."

We also looked at related research that examined similar questions with alternative methods and different data sources. Grant and Patterson (1975) in a panel survey of Buffalo, New York used three criteria to measure random responders (high intra-person variance to scale items, bidirectional change over time, and inconsistent responses to reversed items) and found that on three psychopolitical scales nonattitudes correlated with low education, low political information, low income, and being black, but were unrelated to political interest. (See also Patterson, 1972).

Herbert R. Asher (1974b) in an analysis of the 1956-58-60 election panel and the 1968 pre- and post-election surveys found that consistency on political efficacy items was generally higher among those with more education and political interest. The opposite relationship appeared on the "no political power" item, however, and the other items showed mixed or qualified associations. Asher summarized that "a partially successful attempt was made to attribute the low reliability to properties of the respondents rather than to deficiencies of the measuring instrument itself" (1974b, p. 64).

Iyengar (1973) in a student sample using six social/political psychological scales found no consistent associations between social and political interest, political information, level of opinionation, GPA, course grade, or age and consistency. He did discover that

consistency was associated with scalability on the political efficacy scale. Those who tended to answer the efficacy scale in conformity with Guttman standards showed greater consistency in their scale scores over time. In effect, those who responded to the efficacy scale in a non-random manner were more consistent in their responses across time.

Smith (1980), in several small (200-300 case) national panels over a six-week period, noted that education was the best predictor of consistency. He believed this was due to the better educated having greater reliability rather than greater stability. He did not relate reliability to instrument error vs. nonattitudes, however.

Steven R. Brown (1970) in a small, short-term study of consistency found no differences between political articulates and inarticulates.

Bishop, Hamilton, and McConahay (1980), in a small panel of suburban New Haven, found that the college educated were not significantly more consistent than those without a college education over a nine- to eleven-month interval.

Using a small subsample from SRC's 1972-74-76 panel, Charles M. Judd and Michael A. Milburn (1980) found that, correcting for measurement error, the stability of elite and nonelite groups (college graduates vs. no college) was the same.

Finally, Hahn's analysis (1970) of a two-wave flouridation survey in Detroit found that converters (people who changed sides on the issue) were less likely to have read about the issue, less interested in the issue, less likely to vote, less likely to vote on the flouridation issue, but more likely to have a high or increasing level of discussion about the issue than the consistent group. The differences were usually small and insignificant, however, and were less than the differences between converters and ambivalents or indecisives (people with DKs at

one or both times respectively). Furthermore, Hahn accepted his data at face value as describing true differences between four accurately distinguished groups and did not infer that the converters were non-attitude holders.

The net result of this comparison between over time consistency and political and cognitive involvement is rather mixed. Evidence from the original SRC panel shows no relationship while the relevant other studies show mixed results. Overall, if we take inconsistents as indicators of nonattitudes, then we would expect a much more substantial and repetitive association. Two factors might explain these findings. First, we must assume that true change is a negligible factor or at least is constant across groups. Trivial true change is assumed by both sides in the SRC panel data and is implicit in the Grant and Patterson[1] and Iyengar studies. Hahn, however, makes just the opposite assumption that all the changes represent true change (and thus those who switch sides on the flouridation issue are "converters" while the black-and-white model counts them as nonattitude holders). If there is an appreciable amount of true change and it differs between groups we can not separate out the association between true change and these various attributes and have not even begun to determine if the measurement error resembles nonattitudes or instrument error.[2]

Second, it may be that most of the measures used do not really relate to nonattitudes. While Converse does argue that general measures

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[1] Grant and Patterson use across time change as only one of three criteria to measure random responders and their measure of bi-directional change on scale items also differs considerably from the simple criteria of switching sides on an issue.

[2] If true change is an appreciable factor then it becomes impossible to tell whether the measurement error behaves like nonattitudes, but it does argue that inconsistency over time is not an adequate way of separating nonattitudes from true attitudes.

are related to consistency, he also talks of there being specific issue publics. An individual is a member of some issue publics but not all. It is only the fact that such general orientations as voting and political involvement are related to the number of issue publics a person belongs to that explains the hypothesized relationship between consistency and these variables. Erikson (1979, p. 109, no. 28) acknowledges it might be preferable to measure the level of interest towards the specific issue rather than using global interest and involvement measures. He finds this unsatisfactory, however, stating that it would require that there was no association between general political sophistication and interest to a specific issue and that interest levels were uncorrelated with one another across issues.

Schuman and Presser (forthcoming) show, however, that general measures of intensity are usually poor substitutes for item-specific measures. Because of the disparity between the general and specific, we need to examine the correlates of consistency with more item-specific measures (e.g., issue importance, knowledge about, or activity involving) before we can assess fully their connection. In national telephone panels Schuman and Presser found that item-specific measures show that those who consider the issue more important have higher consistency. Education shows an irregular association sometimes playing an important role and other times apparently unrelated to consistency. Similar results are reported by Dennis R. Goldenson (1979). In a student panel he finds a positive association between issue intensity and consistency.

Because of the confounding of true change and time and the use of general and indirect measures of nonattitudes instead of issue-specific and more direct measures, it is impossible to conclude that nonattitudes are not prevalent among switchers. However, the available data suggest

that either nonattitudes are not highly related to general cognitive and political indicators, that switching is not related to nonattitude holding, or that nonattitude holding is not clearly related to switching because it is not the sole factor in switching, being mixed in with instrument error and true change.

Next we looked at the association between the self-confessed nonattitudes (DKs) and these same background variables. Looking at people who gave one DK in 1956 or 1958 and those who gave DK both times to the power and housing question, we found that they had decidedly less political interest and lower education than either consistents or converters. While 52 percent of the substantive responders engaged in no political activity, 67 percent of those with one DK and 75 percent of those with two DKs reported no activity. On education, 42 percent of those with substantive positions had less than a high school education, while 54 percent of those with one DK and 68 percent with two DKs had less than a high school education. Similar patterns appeared on voting, political interest, and political knowledge.

Looking at the general literature on DKs for associates of DK (see below), we find that there is definitely some correspondence between associates of attitude inconsistency (Converse's prime indicator of nonattitudes) and associates of DKs. Low education, low political interest and activity, and low information and unimportance of the issue are related to both. In general, the associations predicted for nonattitudes hold up more clearly and steadily for DKs than they did for the hidden nonattitudes. It is also apparent that some of the causes of high DK such as task difficulty and question form are not similarly related and other attributes related to DKs have an unknown relationship to consistency and ultimately to nonattitudes.

High DKs Tend With

1. Characteristics of Respondent
   - A. Low Education[1]
   - B. Low Occupational Prestige
   - C. Low Income
   - D. Female
   - E. Old[2]
   - F. Low political activity
   - G. Low political efficacy
   - H. Housewives
   - I. Member of general public rather than opinion leader

2. Characteristic of Interview
   - A. Poor rapport
   - B. No probing for substantive responses
   - C. Telephone rather than personal

3. Characteristic of Issue
   - A. Low media exposure about issue
   - B. Low awareness of issue
   - C. Low knowledge about issue
   - D. Low personal involvement, low self-interest
   - E. Low temporal consistency
   - F. Low intensity

4. Characteristic of Question
   - A. Dichotomy
   - B. Task difficult (long explanation or future projection or requires thought or effort)
   - C. Explicit DK option
   - D. Language difficulty[3]
   - E. Knowledge vs. opinion

In sum, the associates of DKs are generally similar to those predicted for nonattitudes.

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[1]With exception of Hyman and Wright, 1979, p. 28.

[2]Age is found to be related in many studies although some suggest it might be a spurious association due to education. Gergen and Back (1966) argue that age is related to nonopinionation (DKs) as the elderly disengage from society. Norval Glenn (1969), however, challenged this assertion and with controls for education, race, and sex found that there was no association between age and opinionation. Tom W. Smith (1978), using the same controls as Glenn, found the association between DKs and age was reduced by these prior factors but did not disappear.

[3]Jean Converse (1976-1977, pp. 521-523) finds little support for such an association which contradicts early work cited in her article.

A second test on Converse's hidden nonattitude holders compares the inter-item constraint of inconsistents and consistents. Converse argues that the inconsistents are giving random responses and should show no association with other attitudes. Pierce and Rose attempt this test but because they operationalized inconsistency in a manner at odds with Converse's formulation their findings are not relevant. Erikson did successfully carry out this comparison and concluded that "the evidence forces us to reject a literal interpretation of the black-and-white model" (1979, p. 104). He overlooks two important patterns in his findings, however. First, there is a substantial reduction in the associations between consistents and inconsistents. Among consistents, the gammas averaged .60, but among changers it was one-half as strong (.29). This is still nontrivial, but one should be equally impressed with the attenuation as with the residual. Second, by looking at all interrelations between the eight attitude items, Erikson included variables that Converse admitted did not fit his black-and-white model. Converse contends only that the power and housing question was bereft of true change. On the other questions, the changers included those with real attitudes at both times. This group would be expected to show attitude constraint across items. If we look at just the power and housing question, we see that the average gamma among consistents (.52) is reduced by more than two-thirds, if we count absolutes, or by almost four-fifths, if we subtract associations that change signs (i.e., reverse the initial relationship among consistents).

Since it was impossible to tell exactly how Erikson conducted his analysis or whether he had precisely followed Converse's formulations we carried out a parallel analysis. We examined items showing no changes from agree to disagree between 1956 and 1958 and those with one or two

changes but no DKs in 1956 and 1958. On the seven associations between power and housing and the other items, gammas for consistents averaged .191 in 1956 and .196 in 1958. Among changers it was .111 and .078 respectively. The decline was even greater among the domestic items (for which there were fairly arguable face interrelationships). For the four domestic associations involving power and housing the average gammas were: consistents, .447 in 1956, .411 in 1958; and changers, .085 in 1956, .126 in 1958. This pattern was similar for the other domestic interrelationship and to Erikson's findings. It indicates that changers are much less constrained than the stable are. While they have some apparent constraint (and this varies from Converse's description of them as totally random), they show much less constraint than stable attitude holders do. It seems fair to argue that they have a much larger random component than do the consistents.

It is possible that the stable cases have their inter-item associations inflated by correlated error such as a response set. There is little evidence for this, however. Three of the five domestic items are framed in a liberal direction and two in a conservative direction. This reversal tends to negate the correlation pumping impact of a response effect and moreover the association between the two conservatively directed questions is not stronger than those in opposite directions.

A second explanation for the lower inter-item association might be the idiosyncratic ideology perspective that Lane (1962, 1973) suggests typifies mass attitudes. He argues that attitudes are constrained but not by either general liberalism nor any other generalized belief systems. Instead, attitudes are held together by personally meaningful belief systems that can not be aggregated across individuals and thus do not show up in aggregate inter-item correlations. In this case, for Lane's

perspective to explain the differences in the observed attitude constraint, there would have to be an interaction between observed change and ideological type. Either general liberalism leads to more single-item over-time consistency and those with idiosyncratic ideologies are more changeable or some other causal connection would have to exist in order for changers to have just as many true attitudes but much less constraint. While possible, we find it implausible unless we also accept the ideologically idiosyncratic as having much more labile attitudes on each specific issue, a condition that would not make them very different from nonattitudes.

When we turn to DKs we find a constraint pattern that is quite similar to that shown by changers. Erikson found that among those with at least one nonresponse to at least one item, the gammas averaged .31, about the same as for the inconsistents. We found that when there was a DK in either 1956 or 1958 and no change on the other variable that gammas averaged .144 (1956 and 1958) for the associations with the power and housing item and other domestic items. This was less than one-half the magnitude shown by the consistents but twice that shown by the changers (.071). Among those who had two tags of nonattitudes (either DKs on both variables or both variables changed), the associations were even lower, an average of .038 for the domestic power and housing associations in 1956 and 1958. These figures are similar for the other items. They indicate that people who were likely either to switch from or to a DK were less likely to have constrained attitudes than the stable, but that this was not as indicative of lower constraint as inconsistencies were. It does suggest, barring Lane's interpretation, that DKs may indicate more random responses.

Another check on the association between DKs and attitude constraint comes from the opinion floaters literature. Schuman and Presser (1978), Bishop and others (1979), and the 1978 General Social Survey (1980) have asked split, randomized halves of survey attitude questions with and without an explicit DK option. We noted previously that the explicit DK version usually attracts around 20 to 25 percent more DK responses ("floaters") than the implicit version. The impact of DKs on associations can be evaluated by comparing the associations between the implicit and explicit DK versions and other attitude items.

Schuman and Presser (1978) examined three hypotheses on the differences in associations between the forms. The traditional form resistant hypothesis argued that while the distributions would naturally vary, the associations would be similar. Converse's hypothesis, on the other hand, argues that the association between variables would be attenuated on the questions without an explicit DK since that meant that more nonattitude holders slipped into the substantive responses and their random responses would lower the inter-item correlations. Lastly, they considered the counterintuitive explanation that the explicit form would have higher correlations. The results were sufficiently mixed to give strong support in particular cases to <u>each</u> hypothesis. As they concluded, "The number, nature, and size of substantively important interactions attributable to floating remain very much open."

Bishop and others also found a mixed outcome with some associations increasing while others declined, but concluded that "the dominant tendency is for floating to decrease the magnitude of the inter-item correlations" (p. 301). In the 1978 GSS experiment with self-ranking on a liberal/conservative scale, the associations with seven of eight liberal/conservative attitude items were lower when floaters were included,

but the decline averaged a modest .025 (gamma). These results are equivocal enough to suggest that DKs not only do not indicate a complete lack of attitude constraint at prior or subsequent points in time, but also that floating DKs do not consistently have random, meaningless responses that automatically attenuate associations.

Finally, we come to the classic test for nonattitudes. Converse found that on the power and housing questions, those who changed sides between time 1 and time 2 had no association between time 2 and time 3. On other variables there were small associations among changers between time 1 and time 2, but the associations were weak enough to suggest to Converse that a small group of true changers were raising the associations above zero. While these facts have gone unchallenged, their interpretation has not. The instrument error school also interprets these patterns as indicating random measurement error, as opposed to true change, but places the origin with the tools rather than the raw materials.

A similar test of the impact of DKs on consistency can be carried out by looking at whether those with DKs at time 1 have any association between time 2 and time 3. Achen (1974, p. 1226) considered this and found that "a respondent could describe himself as having no opinion at one of the time points and still give at the other two time points responses that were far from random." We found that this was true on the power and housing and school integration questions, but that the over time correlations were weaker. For example, among those who gave either agree or disagree responses in 1956 to the power and housing question the gamma between 1958 and 1960 was .371 while it was less than half (.182) for those giving DKs in 1956. Similarly for school

integration the respective gammas were .559 and .413.[1] Once again, this suggests that while expressing DKs does distinguish cases from substantive answers and indicates a presence of more random variation, they are not indicators of totally random responses as the black-and-white model suggests.

It could of course be argued that at time 1 these were totally vacuous nonattitudes but between time 1 and time 2 some had changed and adopted real attitudes on the questions. The lower associations would be explained by the fact that some had merely changed from self-confessed to hidden nonattitudes and that these cases were attenuating the consistency association between time 1 and time 2. This is a reasonable possibility, but one that neither Converse's black-and-white model nor the other three-wave models permit (except Dean and Moran, 1977). Both approaches excluded from analysis cases that were DK at any time. This results in a major loss of cases. For example, Achen reports reduction on attitudes of 30-50 percent and Judd and Milburn (1980) have their case base reduced by 65 percent. This also precludes any true change between nonattitudes and holding real attitudes. The exclusion of this large group greatly restricts our understanding of the general process of attitude formation and change.[2]

Various tests of the hidden and self-confessed nonattitude groups often show differences in the expected direction but not as extreme or regular as predicted. Hidden nonattitude holders (changers) had

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[1]Ambivalents had correlations betwixt agree/disagrees and non-attitudes. If they were switched from DKs to substantive responses they would lower both gammas slightly.

[2]Panel attrition and initial nonresponse also reduce coverage and the literature suggest that both losses would be disproportionately high among nonattitude holders.

weak and scattered associations with most general measures of political involvement and education, but did have more notable associations with item-specific measures of interest. They showed much less constraint than the consistents, but did have associations with other policy items. Over subsequent waves changers between time 1 and time 2 did show weak or independent associations. DKs were correlated with low political involvement and education as expected, had lower constraint than the consistents (although not as low as changers) and had lower but not random associations over time. This may result from the contamination of nonattitude groups with attitude holders (e.g., true changers among the inconsistents or ambivalents among the DKs). It may also come from the fact that there is not a sharp dividing line between attitudes and nonattitudes. There is rather a continuum from completely vacuous guesses at one end to crystallized, integrated opinions at the other. People tagged as nonattitude holders because of a switch in sides or a DK response at one time may have labile attitudes with low centrality, but still have some affect towards the issue. While they may lack a stable, fully-articulated, and meaningful position on the issue, they may well have certain leanings.

Evidence of Instrument Error

The instrument error critics do not specify what the source of the unreliability is or how it might be corrected. Achen (1975, pp. 1221, 1222, 1226) talks generally about the "vagueness" of the questions and at one point subdivides that into question and response ambiguity. He also acknowledges that his statistical formulation counts all sources of "observation error" as part of measurement error. This includes such matters as level of measurement problems, clerical error,

and interviewer effects. Erikson refers merely to "the general fallibility of the measuring instrument itself" (1979, p. 91) and with equal generality, Pierce and Rose discuss "instrument-related variations reflecting both the instrument's and the individual's inability to discriminate the individual's precise affect" (1974, p. 629).

These authors do not attempt an evaluation of individual items and offer neither specific nor general advice on how questions could be improved to reduce the instrument-related error. To a certain degree this is probably a prudent course since it is a difficult and subjective task to evaluate the reliability of items merely by perusing the question and response categories. Except for obvious basket cases, the reliability or "vagueness" of an item is often not readily apparent by simply reading it and it is difficult to isolate instrument error from substantive error by face appraisal (e.g., obscure issues might be thought vague by people not familiar with them). Yet despite the drawbacks of this approach it is still worthwhile to subject the items to a face evaluation.

Starting with the response categories first since they are common to all questions, we find that respondents are presented with a card with five ranked categories: agree strongly; agree but not very strongly; not sure, it depends; disagree but not very strongly; disagree strongly. There is naturally vagueness between any two adjoining points on this scale (as there would be on any scale), but the categories are well ordered and clear. Given our general state of knowledge about response categories, this scale seems satisfactorily standard.

Turning to the questions themselves, we find that several are more problematic. Several suffer from concept vagueness. This vagueness usually comes from an attempt to frame general questions that cover

some basic issue domain such as isolationism, public/private ownership, or civil rights. The problem is in trying to formulate a facet-free question that taps the broad issue rather than some particular specific example, the question has to speak in general terms. This unfortunately can also lead them to take on a certain vagueness and thus we begin to slide from substance-related difficulties into instrument-related problems. For example, people may have trouble with the isolationism question because they do not know and/or care anything about either foreign affairs or political issues in general or they may run into difficulties because they can't decide whether or not it implies a strong anti-Communist policy. This is an intrinsic problem of asking general questions. The alternative way is to ask several more specific and concrete questions about the domain and determine one's general place on the underlying issue by scaling responses.

There is also some tendency to use vague or euphemistic action words and phrases: "to handle" power and housing, having troops "help" against Communism, "to see to it that they (Negroes) do" get fair treatment. Probably the most problematic is the famous power and housing question, "The government should leave things like electric power and housing for private business to handle." It is double-barreled and "to handle" is very vague. The isolationism question is also plagued with vague phrases, "This country would be better off if we just stayed home and did not concern ourselves with problems in other parts of the world." What does it mean to stay home and not concern ourselves? No military alliances, no foreign bases, no diplomatic overtures? What is a "problem"? Natural disasters, internal political turmoil, international disputes, the Korean invasion? Are "other parts of the world" a homogenous group? Are the Falkland Islands, England, and Canada all interchangeable?

Other questions, such as those on foreign aid, federal aid for schools, and job opportunities have no special problems with vagueness, being double-barreled, or other obvious defects. In sum, there is face evidence that several items, and especially the power and housing question, may suffer from instrument unreliability.

Converse counterargues that since he counted only those who switched sides on an issue as inconsistents and thus nonattitude holders, it is doubtful responses could vary so widely while still emanating from a meaningful and unchanged attitude on the issue. He is probably largely correct if we think in terms of response vagueness. There is not sufficient ambiguity in the response categories to permit many respondents with real attitudes from switching sides because they cannot place themselves on the scale.

But question vagueness in another problem. Take again the power and housing question, "The government should leave things like electric power and housing for private businessmen to handle." Suppose a respondent believes in private ownership of utilities with a strong utility commission protecting the consumers from this natural monopoly and private construction and operation of housing units except for a public housing sector for the poor. This would have been a common, mildly liberal position for the mid-fifties. In 1956 the respondent could have said strongly agree since in both cases he basically favors private ownership. In 1958, or for that matter, a day before or after his 1956 interview, he could say strongly disagree because he doesn't see the liberal safeguards he favors. Both extreme positions are entirely reasonable given his attitude and how he interprets the question at each administration.

While Converse's case is weakened by the apparent inadequacies of his central "power and housing" question, he does have a good example

where instrument error is not the problem. On the 1972-74-76 panel, a feeling thermometer was asked about various public officials. For "Edward 'Ted' Kennedy," the correlations were .722 and .671 for two and four years respectively. For "Henry 'Scoop' Jackson," the correlations were .445 and .343. Since the names were the only difference between the items, it is apparent that the variation must be accounted for by something other than instrument error. (Both correlations of course may be attenuated by simple random response error or other more complex errors, but we are interested in the relative difference which can not readily be accounted for by an instrument error differential.) True change is a possible explanation and the decreasing correlations across time suggest that linear change was occurring. It is hard to imagine, however, that there was considerably more true change in reference to Jackson than to Kennedy. The more plausible explanation, which Converse offers, is that Jackson's ranking included considerably more nonattitudes at one or all three waves and that these responses attenuated the consistency correlation.[1]

On one level the choice between the nonattitude and instrument error explanations are crucial since, among other things, they indicate what steps should be taken to remedy the situation. But both are forms of measurement error and both explanations argue that many ordinary or standard survey questions are heavily contaminated with error and are unreliable. An optimist might observe (making the standard assumption about the randomness of measurement error) that this merely attenuates relationships and therefore that correlations are really substantially

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[1] More generally, Converse (1964, 1979) explains differences in consistency correlations as due to differing levels of salience and interest. On balance this seems a more plausible explanation for differences in consistency than variations in instrument error.

stronger and social science models significantly better predictors than the tainted raw data indicates. Furthermore, he might continue, if a three-wave model or other appropriate techniques were employed, the measurement error can be adjusted for and the true pattern of relationships revealed. Unfortunately, the underlying assumption that drives this optimism (that measurement error is purely random) is statistically convenient, but empirically dubious. The actual error structure, while undoubtedly containing a random element, is considerably more complex (although almost never actually known because of the complexity) and contains such intricacies as error correlated with true scores interacting with background variables (e.g., a social desirability effect specified by educational attainment). The upshot is that there is no quick, easy, and general solution to the problem of measurement error. Instead, considerable effort must be exercised to ferret it out, assess its nature and impact, and adjust for its distortions. This can not be done either simply or completely, but through a combination of approaches it is possible to gain considerable useful information about the error structure (Smith and Stephenson, 1979; and Jackson, 1979).

True Change

True change has been consistently rejected as an explanation for the low consistency by both the nonattitude and instrument error schools. The black-and-white model posits no true change and the various stability correlations usually excede .90 in the instrument error models. Only Hagner and McIver (1980) propose true change as a significant source of response variation. In an unfortunately sketchy and problematic piece, they offer evidence from a national panel during the 1976 election campaign that real change is a source of response variation. While certain of their methods are unclear and their results are more equivocal

than they realize, they do show that the Heise/Wiley and Wiley techniques are much more suspect than usually acknowledged. In 7 of 25 calculations, the stability coefficient exceeded 1.0. While this occurred more sparingly in the SRC data (in 6 of 36 instances in Erikson, 1979, p. 95), other data sets have found the explosion of stability coefficients even more common (in 16 of 32 instances in Smith and Stephenson, 1979). These anomalies are the result of the inability of the real data to meet the fairly stringent assumptions that are necessitated by the three-wave models. As Converse notes in regard to the 1972-74-76 panel data, "(A)ssumptions embedded in the calculations of the Heise or Wiley and Wiley type . . . are not entirely well met by the data" (1979, p. 38; see also Jackson, 1979, p. 413). Moreover, coefficients that exceed 1.0 are only the absurdly obvious consequences of modeled data being distorted by the deviations of the data from the assumptions. Other coefficients are being distorted, but not being exposed by being pushed over the 1.0 boundary.

In addition, there is some question whether the model really distinguishes between measurement error and true change even when subsidiary assumptions (uncorrelated error, etc.) are appropriate. The model assumes that true change is monotonically related to time. It assumes that as time increases the stability correlations will decline. While this condition will frequently prevail, it is not a necessary attribute of true change. Cyclical change, such as business-cycle-related attitudes or perhaps presidential popularity, would not fit this model. Nor would a probably much more common type of change, what Kendall (1954) called molecular change. Molecular change results from "personal, perhaps idiosyncratic" factors.[1] It is largely unrelated to societal level

[1] Bennett (1975, p. 120) makes a similar argument. But see Wyckoff's (1980, p. 121) comments.

events or to time. A person's attitude moves up-and-down or from pro-to-con-to-pro again based on such factors as mood and personal life events. True changes of this type which are essentially randomized over time will be counted as part of the error variance in the three-wave models (Smith and Stephenson, 1979, pp. 44-45). Because the three-wave models and other related approaches cannot actually separate true change and measurement error cleanly and simply, true change cannot be dismissed as a trivial factor in explaining inconsistency.

Implications

We believe that there is an appreciable amount of both instrument error and nonattitudes in many opinion questions. We also suspect that the nearly universal dismissal of true change as a force has probably been premature. What is needed is a two-pronged approach to (1) better shift out the relative roles of nonattitudes, instrument error, and true change, and (2) minimize the measurement error components. These two approaches are of course complementary since presumably whatever we learn about the different types of error can in turn be used to segregate or reduce them. We will in turn look at what might be done to deal with nonattitudes and instrument error and how true change can be distinguished.

From Converse's perspective what is needed is for people without attitudes to stop giving random or labile responses to interviewers. Unfortunately, as Converse points out, respondents on the 1956-58-60 panel were in general encouraged to decline to answer questions that were not meaningful, and on particular questions were given an opportunity to say that they had no opinion (had not thought about the issue) or did not know where to place themselves on the issue. Despite this

encouragement, Converse of course finds that many people with nonattitudes still slipped into the question and gave their random responses. It might be possible to reduce this problem further if the no opinion screener was made stronger (e.g., "Please answer this question only if you've given this issue a lot of thought and have a firm opinion about it"). It is uncertain, however, how many would continue to offer nonattitudes and the possibility exists that people with real attitudes will be driven from the question as one raises the barrier to nonattitudes (Presser, 1975, p. 81). As an alternative, David E. RePass (1971) suggested that open-ended questions should be used since they "measure both affect and cognition. In using such questions, the researcher comes much closer to measuring an attitude which is on the respondent's mind (salient) at the time of the interview . . ." Open-ended questions can quite clearly provide a better indication of the complexity and depth of attitudes, but by just relying on a substance-oriented open-ended question, information about salience and cognition are both hard to extract and imprecise. More promising would be an open-ended follow-up to plumb the depth and content of the initial response. Certain attributes of open-ended questions, inter-coder reliability and high cost, are, of course, known drawbacks of this approach.

Another promising approach is to ask the affect question of everyone, but to supplement the question by asking about related dimensions such as knowledge, intensity, behavior, or centrality. George Gallup (1947), for example, proposed a "quintamensional design" which included five parts on (1) understanding or knowledge, (2) closed-ended affect, (3) open-ended affect, (4) reasons why, and (5) intensity. A similar approach was used by G. David Faulkenberry and Robert Mason (1978) in a study of wind energy. They had interviewers distinguish

between nonopinions (or nonattitudes in Converse's parlance) and no opinions (undecided or ambivalent positions on an issue) and also had batteries on awareness, media exposure, and objective knowledge. Along these lines Converse (1970, p. 183) suggested that the level of information about the object in question should be measured. A related approach was used by Goldenson (1979), who asked an intensity question along with an affect question about each item. He also suggested that a salience question might also be asked along with the others. Intensity and closely related concepts such as importance and saliency in particular have been found to be important variables in explaining both substantive results and discriminating between response styles and errors (Hennessey, 1970, pp. 104-107; Schuman and Presser, forthcoming; Jackman, 1977, pp. 162-1964; and Kendall, 1954). While there is no general consensus on just which variables should be included, there is evidence that several different dimensions play an important role.

The advantage of taping the intensity, knowledge, salience, and other dimensions along with the affect dimension is that one can then study the interrelationship of these dimensions and that one can use various criteria from the other dimensions to discriminate responses on the affect dimension (or vice versa). For example, to look only at the affect consistency of people with attitudes, one might exclude those of low intensity and low salience. This seems to be the best way to deal with the problem of nonattitudes. Of course, it is not without drawbacks. People without any attitude toward an issue who nevertheless give a response out of fear of appearing ignorant might inflate the issue's intensity or salience in order not to appear shallow or uninformed.[1] Objective knowledge questions do minimize this problem

[1] Converse argues that such distortion would be less than in the measurement of affect itself (1970, p. 183).

since guessing a wrong response will reveal a person's ignorance, but objective knowledge batteries can not be used in lieu of intensity and salience indicators. Also, asking several dimensions about each issue obviously takes much more time and effort to cover a given topic. All other things being equal, this would mean a tradeoff between asking about affect only on several issues or affect, intensity, salience, and knowledge about only one issue. Finally, it will take careful development to design a set of questions that will give a good, accurate reading of all the relevant dimensions. Still, if one buys even part of Converse's argument about large segments of the population with non-attitudes, some attempt to distinguish such nonattitudes is clearly needed.

To most of Converse's critics, the need is not to screen out nonattitudes but to improve the questions. Unfortunately the critics are silent about what specifically is wrong with the questions and thus do not offer remedies. Two fairly common approaches along these lines would be to improve wordings and response categories and use multi-indicator scales. SRC has apparently tried to follow the first approach since their basic policy questions have undergone two basic transformations since the fifties. There is, however, little concrete empirical information on what, if any, improvements these changes have made towards reducing measurement error.[1] Multi-indicators have not gotten extensive use in the SRC national election surveys or in such sociological counterparts as the General Social Surveys. Scales are in common use, but repetitive parallel indicators needed for determining the equivalency

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[1] For some such work, see McPherson et al., 1977, and Asher, 1974a.

reliability are rarely found[1] (Lehnen, 1971-72). Of course, as in the case with measuring various dimensions of a question, the more indicators that one uses to measure a single issue, the fewer issues one will be able to measure, ceteris paribus. In addition, when putting together equivalency scales, one will have to be careful not to introduce more response error by inadvertently creating a response set or some related error. It is also possible in part to assess the instrument reliability of old or improved questions by comparing the affect responses to the other dimensions outlined above. It is plausible, however, that improved items can be (or, in the case of changes SRC has already made, have been) made and any such improvement would be highly desirable.

In addition more attention should be given to the role of true change as a cause of inconsistencies. Once again the multidimensional approach should help by increasing our knowledge of the composition of attitudes. Someone who gives different responses at two times and who exhibits knowledge about the issue and gives an informed explanation for his position each time has probably undergone true change. Another direct approach is to ask for reconciliations when a different response is given (Smith and Stephenson, 1979). Statistical models such as three-wave techniques are generally inadequate solutions to the problem, however.

Finally, more attention should be given to considering when correlational measures of consistency (e.g., r) are the appropriate form or when changes in absolute position (e.g., percent with same response) are meaningful. As Robert Weissberg (1976-77) has shown, these

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[1] In particular, we have in mind a series of items dispersed throughout the questionnaire for which it would be difficult or logically incongruent to answer in different ways. Examples would be (1) syllogistic triads, (2) reverse order agree/disagrees, and (3) parallel questions.

two definitions of consistency are not only theoretically different, but can create some large empirical differences as well. (See also Asher, 1974 and Converse, 1979, pp. 44-45).

We come to two conclusions, that nonattitudes, instrument error, and molecular change are all contributors to the low consistency that Converse first sought to explain twenty years ago. The relative share of each probably varies widely across questions and among subgroups. Moreover no simple statistical model such as the black-and-white or the Heise/Wiley and Wiley techniques can separate these elements. Instead much more elaborate and multi-pronged approaches that will not yield clear-cut summary adjustments will be needed to probe responses. Yet such an approach has a more meaningful reward. By probing individuals rather than aggregates, we will gain a much better understanding of the error structure of opinion questions, attitude change, and even how the human mind works.

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