

Recalling Attitudes: An Analysis of Retrospective Questions
on the 1982 General Social Survey

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Retrospective survey designs are commonly used in many areas of the social sciences. These include oral histories, life histories, patient histories and studies of fertility and contraception, child development, the attainment process, voting and partisan affiliation, medical care, consumer purchases and finances, readership, and public opinion. Respondents are asked to recall attributes, events, behaviors, and attitudes from the immediate to distant past. Both experimental work in cognitive psychology on memory and reliability checks on actual retrospective survey data find notable error from forgetting and memory distortion. Three general errors are common (1) forgetting--a failure to report a given fact; (2) time displacement--associating events and behaviors with the wrong period, usually telescoping events; and (3) distortion--the changing of facts usually to fit into a more consistent or standard pattern. Errors occur most frequently about the details of events and unimportant events and about repetitive events which are easily confused. Most studies of the reliability of retrospective surveys have focused on relatively short period (several days to about a year) and/or demographics attributes (e.g., residence, employment, marital history) and behaviors (medical care, use of alcohol, voting). Improvements in recall have been achieved through various refined data collection techniques such as bounded recall, positive feedback, and diaries. The general consensus is that while all retrospective data are flawed by memory errors, when an optimum design is executed results are sufficiently accurate and reliable for most applications.¹

¹The single best source on the reliability of retrospective survey data is Moss and Goldstein (1979). On memory research in cognitive psychology see Loftus (1979) and Klatzky (1980). On time period distortion see Sudman and Bradburn (1974). Examples of studies in particular areas are: oral histories - Thompson (1978) and Cutler (1970); life histories - Davis and Smith (1980) and Smith and Klaeser (1982); voting - Smith (1982), Himmelweit, Biberian, and Stockdale (1978) and Traugott and Katosh (1979); consumer finances - Ferber (1966); health care - Andersen et al. (1979) and Cannell,

For attitude recall the situation is less clear. Despite the widespread use of various forms of attitude recall there are few studies of the reliability of attitudinal data. There is however a general belief that the recall of attitudes is less reliable than the recall of behaviors and events (Wenar and Coulter, 1962; Dankin and Rennant, 1968; Thompson, 1978; Hindley in Moss and Goldstein, 1979) and some go so far as to state, "There are very strong reasons for rejecting the idea that subjective experiences, like emotions, can be recalled at all" (Moss and Goldstein, 1979:111).

Most studies of attitudinal recall deal with panel studies of child development. Haggard, Brekstad, and Skard (1960) compared the recall of vital, behavioral, and attitudinal information over 6-month and 8-year intervals for 17 Norwegian mothers. They found that reliabilities fell as the interval increased and that "hard facts" were recalled most accurately followed by general wishes and attitudes, and lastly by anxiety scales. Differences in distributions were not considered. Robbins (1963) studying a panel of approximately 40 parents recalling child care behavior typically two to three years earlier found substantial inconsistencies and an overreporting of socially desirable responses. Wenar and Coulter (1962) using 25 mothers examined child care behaviors and attitudes over a 3- to 6-year period and found large inconsistencies but no bias in recall. Inconsistencies tended to be greater for items with high affective content. Yarrow et al. (1970) looking at child and maternal recall of nursery school experiences from 3- to 30 years earlier found low correlations between contemporary and retrospective measures, frequent systematic shifts toward positive responses, and little difference between vital, behavioral, and attitudinal questions.

Miller and Oksenberg (1981); and miscellaneous - D'Andrade (1974), Metzner (1949-50), and Belson (1962).

Studies of attitude recall in other areas are few in number and diverse in content. Powers, Goudy, and Keith (1978) using a panel of elderly Iowa males examined recall over a 10-year span. They found that the percent agreeing to 7 items ranged from 88 to 23 percent, but that there were no notable differences between attitudes and factual questions. Errors tended to enhance self-images. While recall was often inconsistent and showed bias, there was considerable agreement between associations based on the recall data and the original data and variables on the 1974 panel wave. Gutek (1978) using a national adult sample looked at recall of encounters with bureaucracies over 5 periods ranging from the last 3 months to 12 years or longer. She observed that the correlations between recalled attitudes did not appreciably vary with recall interval and concluded that the data were equally reliable over all five recall periods. No criterion was available to evaluate distributions. Dakin and Tennant (1968) with an elite sample of 59 compared responses a year apart about evaluations of organizational activities and personal demographics 1 to 5 years prior to the initial interview. They found that attitudes were less consistently reported than demographics and that consistency declined as the recall period increased. They did not examine the question of bias. Duncan (1975) and Duncan, Schman, and Duncan (1973) found in the Detroit Area Survey that when reports of parental childrearing values were compared to an earlier cross section the traditionalism of parents was overestimated but that the association between early age cohorts and traditionalism was replicated by the parental recall data. Finally, studies of partisan preferences come close to attitudinal recall, but differ in that there are typically pronounced behavioral clues and events that can serve as indicators of party identification (voting and registration affiliation). Andersen (Nie et al., 1976) has used recall data to reconstructed party

affiliation distributions up to 32 years earlier and was able to match distributions from contemporary surveys 15 years earlier, but Ritter (1980) offers evidence that the recall may be in error for many respondents. He argues that many respondents are merely projecting backwards their current affiliation and that such solidly Democratic groups as blacks and Jews fail to mention Republican leanings prior to the New Deal.

In brief, while existing studies tend to question the reliability of attitudinal recall they are ambivalent on whether bias is present and whether retrospective attitudes are less reliable than demographics and behaviors. In addition their conclusions are limited by (1) the small, unrepresentative samples frequently used; (2) a typical failure to distinguish between test/retest unreliability and recall unreliability; and (3) their concentration in the area of child development.

To test the reliability of attitudinal recall we added three modified questions to the 1982 General Social Survey. (The General Social Survey consists of personal interviews with a full probability sample of the adult, noninstitutionalized population of the contiguous United States. For details see Davis and Smith, 1982). Immediately after asking about current attitudes towards Communism, school busing, and racial inter-marriage we asked respondents what their opinion had been 10 years earlier, in 1972 (see appendix for Question Wording). Respondents were then weighted by birth cohort to stimulate the adult population at the earlier reference point and the 1972 General Social Survey (or 1973 in the case of the Communism item) was used to validate in the aggregate the retrospective attitudes. Busing was chosen to represent items showing little or no aggregate change over the 1972-82 period. This we thought would represent an easy case for recall since the stability of the aggregate distribution may indicate relatively stable attitudes among

individuals and therefore make recall of a constant attitude easy. (The literature on recall finds that errors are more common when the attributes being reported on have changed in the interim (see Dakin and Tennant (1968); Himmelwait, Biberian, and Stockdale (1978)). In addition even if no meaningful recall took place the early distribution could be reconstructed if most respondents projected their current position and some respondents randomly changed their opinion in both directions. On Communism and racial inter-marriage on the other hand significant true change occurred over the last decade. Chance reconstruction would not reproduce the earlier distributions and presumably more individual change occurred on these items thereby reducing possible reliance on constant attitudes.

On school busing the retrospective data closely reconstructs the marginal distribution in 1972 (see Table 1). On racial inter-marriage the recall data significantly overestimates (7.7 percent) support for anti-miscegenation laws. While support for anti-miscegenation laws did decline cross the cross section populations between 1972 and 1982 (39.3 to 32.9 percent), this change was entirely due to cohort turnover. Among the 1972 weighted birth cohorts there was no significant change in inter-marriage (39.3 to 40.5 percent). Thus the recall data does correctly point out the direction of the change, but by overestimating the intra-cohort change it significantly overestimates the magnitude of the change (actual change equals -6.4 percent versus recall of -14.1 percent). On Communism by contrast even the direction of the change is misestimated by the recall data and the percent believing that Communism^e is the worst form of government is overestimated by 26.5 percent. Respondents thought they were more opposed to Communism in the early 70s, when in fact the warm glow of detente made people less hostile to Communism at that time. Perhaps people are focusing on the highly visible anti-Communism of the McCarthy

era (circa 1948-1955) rather than the period of detente. In sum, we find that only in the "easy" case of school busing did recall accurately reconstruct attitude distributions 10 years earlier. On racial inter-marriage the correct direction was pointed out, but the magnitude was significantly distorted. On Communism even the direction is wrong and the magnitude of the misestimate is substantial. The common thread that seems to run through these and other examples (Duncan, 1975 and Powers, Goudy, and Keith, 1974) is a tendency to overreport conservative positions and traditional values.

To examine the discrepancies between the original and reconstructed marginals we ran crosstabs with educational attainment. We hypothesized that there might be an interaction with the educated being better able to reconstruct their past attitudes than the less educated. As Table 2 shows there were significant interactions with education in each case, but only once in the hypothesized direction. On racial inter-marriage the reconstructed figures for the college educated matched the original figures, while the estimates for the less educated groups were substantially off. On the other two questions, the college educated estimates are the furthest off. Because of these interactions the reconstructed associations between education and the attitudes differ substantially from the actual associations. The original busing data showed a shallow u-shaped relationship with opposition to busing highest among the less educated. The reconstructed data on the other hand has a v-shaped relationship with opposition highest among the college educated. On racial inter-marriage both the original and reconstructed data show an association between education and opposition to anti-miscegnation laws, but it is significantly more pronounced in the reconstructed data. Both surveys also show that opposition to Communism is greatest among the less educated, but while the difference between the less educated and college educated is

27.0 percent points in the original data it is only 11.0 percent in the reconstructed data. In brief, recall interacts with education on all three variables and the reconstructed associations substantially distort the relationships described in the original data.

We examined several other variables (region, party identification, sex, religion, and residence (rural, town, city, suburb, metro) at age 16) to see if similar interactions occurred.² The results were quite opposite those suggested by education. Only one of the twelve associations between original and reconstructed attitudes significantly interacted (busing with religion). These results argue that associations are often faithfully reconstructed by retrospective data. In part this may merely mean that concurrent associations which have not changed in the aggregate since 1972 are being reproduced in the recall questions.³ Also, since we have no way to predict which associations will be accurate and which will differ, it would be difficult to accept on recall attitudes as a reliable indicator.

At best attitude recall appears a hazardous enterprise. Most attitudes are not stored as discrete facts like birthdate, zipcode, or name of first U.S. president. Those attitudes which were firmly held by an individual and perhaps fixed by verbal expression (in arguments, debates, etc.) or other conscious activity can probably be recalled almost as reliably as current

²To be sure that any changes are due to recall and not to changes in the independent variable fixed variables which have not changed for the respondent should be used such as sex and residence at age 16. Because the range of such fixed variables is limited we also included several variables which are known to be relatively stable among adults (region, party identification, and religion) and for which we doubted any change would be associated with attitudes towards the questions of interest.

³On racial inter-marriage the association between education and tolerance did increase between 1972 and 1982. The reconstructed 1972 association are closer to the 1980 association than the original 1972 association.

attitudes. But most attitudes are not fixed and stored as discrete facts subject to fairly direct recall. Most opinions instead are expressions of incomplete memory scans of relevant experiences, predispositions, and emotions. To recall a typical attitude a person must try to remember these various bits of cognition and assemble them as one would have at an earlier point. Such a mental exercise may be impossible and undoubtedly is difficult. Rather than successfully fulfilling this task most respondents probably adopt a simpler strategy either (1) projecting backwards current attitudes,⁴ (2) devining attitudes from external clues such as known or perceived changes in national or community attitudes, or (3) adopting an attitude from some point of salience in the past which may or may not match the period for which recall is requested. While these and other possible strategies may often help respondents come up with the correct answer, they will often lead to notable distortion. In addition, recall can interact with other variables, especially education, so that one cannot be assured of correctly reconstructing associations between variables. In sum, the nature of most attitudes and the difficulty of recall in general combine to seriously undermine the reliability of attitude recall.

⁴Evidence of backward projection comes from the high level of agreement between the concurrent and retrospective 1982 questions (percent agreeing: busing=91.9 percent; racial inter-marriage=93.3 percent; Communism=83.5 percent uncollapsed, 87.1 percent dichotomized). These rates of agreement are all above figures from test/retest comparisons over approximately a four to six week period on the 1972 and 1973 GSS (test/retest percent agreement: busing=85.5 percent; racial inter-marriage=86.3 percent; Communism=80.6 percent collapsed; see Smith and Stephenson, 1979). Given that true change should probably be greater over ten years than six weeks, it appears that there is more correlated error in the retrospective data in the form of backward projection. (This may be heightened by the appearance of the concurrent question immediately before the retrospective question. The bias of the reconstructed marginals do not substantially arise from this cause, however, since the reconstructed distributions would have been closer to the actual 1972 distributions if concurrent 1982 data weighted by birth cohorts had been used instead of the recall data.)

TABLE 1: Distributions on Communism, Racial Inter-Marriage, and School Busing in 1972-3 and as Reconstructed from 1982

<u>Communism</u>	<u>1973 GSS</u>	<u>1982 Recall*</u>	
Worst Form of Government	44.2%	70.7%	
Bad, not Worst	27.5	17.8	
All Right for Some	25.1	10.2	
Good Form	3.1	1.3	
	(1445)	(1421)	$x^2 = 218.8$ prob.=.0001
<u>Racial Inter-Marriage (Whites Only)</u>	<u>1972 GSS</u>		
Favor laws forbidding	39.3	47.0	
Oppose laws forbidding	60.7	53.0	
	(1309)	(1309)	$x^2 = 15.9$ prob.=.0002
<u>School Busing (All)</u>			
Favor	20.3	20.6	
Oppose	79.7	79.4	
	(1544)	(1419)	$x^2 = 0.1$ prob.=.79
<u>School Busing (Whites Only)</u>			
Favor	13.5	16.6	
Oppose	86.5	83.4	
	(1294)	(1282)	$x^2 = 4.8$ prob.=.027

*Weighted to match distribution of birth cohorts in 1972-73

TABLE 2: Original Attitudes by Reconstructed Variables by Education

A. SCHOOL BUSING

	Original 1972	Reconstructed 1972	Original- Reconstructed			
% Favoring						
less than high school education	22.3%	21.3%				1.0%
high school education	17.9	13.1				4.8
greater than high school	19.9	27.2				-7.3

ORIGINAL versus RECONSTRUCTED	Hypothesis	Model	x ²	df	prob.	Decision
	1. no difference	d=0	11.1	3	$\frac{1}{4}$.011	reject
	2. constant difference	d=c	11.1	2	$\frac{1}{4}$.004	reject

B. RACIAL INTER-MARRIAGE

	Original 1972	Reconstructed 1972	Original- Reconstructed			
% Favoring Anti-miscegenation						
less than high school	58.6%	69.5%				-10.9%
high school education	33.6	47.5				-13.9
greater than high school	22.3	23.0				-0.7

ORIGINAL versus RECONSTRUCTED	Hypothesis	Model	x ²	df	prob.	Decision
	1. no difference	d=0	29.1	3	$\frac{1}{4}$.001	reject
	2. constant difference	d=c	10.2	2	$\frac{1}{4}$.006	reject

C. COMMUNISM

	Original 1973	Reconstructed 1973	Original- Reconstructed			
% Communism is worst						
less than high school	54.6%	75.1%				-20.5%
high school education	48.8	73.5				-24.7
greater than high school	27.6	64.1				-36.5

ORIGINAL versus RECONSTRUCTED	Hypothesis	Model	x ²	df	prob.	Decision
	1. no difference	d=0	261.1	3	$\frac{1}{4}$.001	reject
	2. constant difference	d=c	15.4	2	$\frac{1}{4}$.001	reject

APPENDIX: Question Wordings

38. Thinking about all the different kinds of governments in the world today, which of these statements comes closest to how you feel about Communism as a form of government? CODE ONE.

- (a) It's the worst kind of all.....1
 - (b) It's bad, but no worse than some others.....2
 - (c) It's all right for some countries.....3
 - (d) It's a good form of government.....4
 - Don't know.....8
-

39. What about ten years ago, that is in 1972, which of these statements came closest to how you felt about Communism as a form of government? CODE ONE.

- (a) It's the worst kind of all.....1
 - (b) It's bad, but no worse than some others.....2
 - (c) It's all right for some countries.....3
 - (d) It's a good form of government.....4
 - Don't know.....8
-

65. A. Do you think there should be laws against marriages between (Negroes/Blacks) and whites?

- Yes.....1
- No.....2
- Don't Know.....8

B. Now, thinking about ten years ago, that is in 1972, did you then think there should be laws against marriages between (Negroes/Blacks) and whites?

- Yes.....1
 - No.....2
 - Don't know.....8
-

61. A. In general, do you favor or oppose the busing of (Negro/Black) and white school children from one school district to another?

- Favor.....1
- Oppose.....2
- Don't know.....8

B. Now, thinking about ten years ago, that is in 1972, did you then favor or oppose the busing of (Negro/Black) and white school children from one school district to another?

- Favor.....1
- Oppose.....2
- Don't know.....8

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