

Andrew Kohut, The Gallup Organization

Over the past two decades, public opinion polls have provided highly reliable estimates of vote preferences in national presidential elections. The final pre-election measures of the polls have been remarkably close to the actual division of the vote. So much so, that the pollsters and their supporters have made much of the "accuracy" of public opinion polls based upon their performance in national elections. Even the critics of public opinion polls in recent years have granted that polls have done quite a capable job of assessing pre-election preferences and have focused their criticisms on other aspects of polling.

In all due modesty, the "record" of the Gallup Poll itself has played no small part in the development of this reputation. Since 1956, when modern sampling and polling techniques were applied to the task of pre-election measurement by Paul K. Perry, architect of the Gallup method, Gallup's performance has been as follows:

TABLE 1.

	GALLUP FINAL SURVEY	ELECTION RESULTS	DEVIATION
	%	%	
1976 CARTER	48.0	50.0	-2.0
1972 NIXON	62.0	61.8	+0.2
1968 NIXON	43.0	43.5	-0.5
1964 JOHNSON	64.0	61.3	+2.7
1960 KENNEDY	51.0	50.1	+0.9
1956 EISENHOWER	59.5	57.8	+1.7
AVERAGE ERROR 1956-1976			1.3

In these six elections, the average differences between Gallup's final percentage for the winning candidate and his actual vote has been 1.3% and the range of differences has been between 2.7% and 0.2%.

In light of this performance it is no small wonder that 1980 came as a shock to poll watchers. In 1980, our final published figures were 47% Reagan, 44% Carter, 8% Anderson, and 1% Other candidates. The actual division of the vote was 50.8% Reagan, 41.0% Carter, 6.6% Anderson, and 1.6% other. This represents a 3.8 percentage point difference between Reagan's actual vote and our final measure of it, which is more than twice Gallup's average error in the past six elections.

The record of the published polls in 1980 has raised many questions about the conduct of pre-election surveys. A great deal of speculation as to why the polls underestimated the size of the Reagan victory was made immediately after the election and continues right until today. AAPOR has considered addressing the performance of the polls in 1980 to the SSRC which conducted an exhaustive inquiry after 1948, and The NCPP is also

considering its own review of the polling in 1980.

If one follows the commentary on the polls in 1980, both by journalists and by members of the profession itself, one sees a variety of reasons given for the under-estimate of the Reagan vote. A number of common themes run throughout these speculations which can be summarized as follows:

- Turnout - Some feel that the Reagan under-estimate was caused by the polls assuming that too large a percentage of the eligible population would actually vote. Since it is commonly believed and correctly so, that a large turnout brings out disproportionately more Democratic voters, this is seen as plausible reason for the problem.

A variation on this is that while the pollsters may have estimated the turnout rate reasonably well, they did not do a good job in distinguishing between voters and non-voters.

- Problems of Response - Some offer the view that respondents were not telling us who they truly supported. The logic most often given is that normally Democratic voters were reluctant to admit that they were voting for Republican Reagan--others take it a step further and charge that voters, because of their feelings about polls, were deliberately attempting to mislead us.

- The Undecided Vote - The conventional wisdom of 1980 was that the undecided vote was larger than ever before. From that belief flows the notion that the polls had trouble allocating undecideds.

- Sampling and Statistical Techniques - These are the least common of the criticisms, perhaps because people who critique polls tend to know less about them, but nonetheless such criticisms have been made. In fact, one well-known pollster feels the problem with the polls in 1980 was that they used statistical weighting procedures. As a point of clarification, his concern was not that the polls were overweighting the data, but that they were using weighting at all.

This presentation will be devoted to generally describing the Gallup pre-election measurement methodology, particularly with reference to the issues of turnout, preference measurement, the undecided vote, and sampling and statistical techniques. However, before beginning, a few comments are in order. First, in the time provided it is not possible to provide a fully-detailed exposition of our approach to these problems, but rather an attempt will be made to give a broad overview of what Gallup does in each of these areas and why. Fortunately, the detailed Gallup methodology is available through the writings of Paul Perry in various issues of the Public Opinion Quarterly.<sup>1</sup> Virtually all of the Gallup methods are a matter of public record.

A second comment is that this presentation is not meant as an apologia of the Gallup method. Hopefully, in each election we learn something which can be incorporated into our practices in

the future. There are indeed important lessons to be learned from the 1980 election.

Finally, a general observation -- in considering the reasons that have been given for the failure of the polls in 1980, one wonders why it has not occurred to the critics that polls could not have done as well as they have in the past without developing methodologies to deal with the issue they raise as causal to our problems in 1980. Turnout, hidden votes, the undecided vote are certainly not new issues -- each of them in fact, was dealt with in SSRC's 1948 report. Had pollsters not come to terms with them since 1948, they could have never accomplished their achievements of the '60's and '70's. In some respects, 1980 was a unique election, but largely the issues posed by it were common to past elections: Our approach to it was as follows:

1) Method of Interviewing - Gallup relies upon personal interviews as its basic means of data gathering for pre-election surveys. At a time when telephone interviewing has become the norm for opinion polling, we continue to see the following advantages of personal interviews over telephone:

a) Our historical frame of reference is based on the personal interview. Our questions were developed for personal interviewing application. Trends are based upon personal interviews. To forego our past experience would be giving up a great asset.

b) For measuring preference, we rely on a self-administered questionnaire which is referred to as a "secret ballot." More will be said of this later, but it obviously cannot be used in a telephone survey.

c) Non-telephone households - Eight percent of all households do not have a telephone, and we estimate that 5% of all voters do not have a telephone. While this is a small group and they would have to divide rather radically to one candidate or another for their exclusion to be a serious problem, each exclusion makes some potential contribution to error.

Besides lower costs, the obvious advantages of telephone interviews are greater control of interviewers, unclustered samples, and the ability to make call-backs in the two or three-day period of interviewing. Although these are attractive advantages for Gallup, they do not outweigh the value of the historical perspective or the ability to administer a closed questionnaire.

2) Sample Design and Statistical Technique - The sample of areas used for the Gallup Poll election surveys is the same as the sample of areas used for the Gallup Poll surveys between election periods. These areas are drawn in accord with the principles of the theory of probability sampling. Between election periods, the areas consist of block clusters and rural segments. In the two election surveys which provide the basis for the final pre-election estimate, the areas consist of election precincts, drawn in the same manner as the block clusters and rural segments. The change to election precincts in the period immediately preceding the election is made because of the greater control provided with regard

to the political representativeness of the sample of the areas. For surveys on most general issues the precinct as the basic area sampling unit would have little or no advantage over block clusters and segments and might have some disadvantages.

The sample of areas is drawn in the following manner: A systematic sample of cities and minor civil divisions is drawn from regional-city size strata with probability of selection proportional to size. Within places so drawn, for election survey purposes a selection of smaller units for which election data are available is drawn in the same manner. In cities, such smaller units are usually wards. Within these units precincts are selected. The selection of the precincts proceeds in this manner: Election results for the previous national election are obtained for each precinct in the ward. One precinct is then drawn with probability of selection proportional to the precinct's total vote. Within the precinct a systematic sample of households is selected, and one adult from each household is interviewed. The total number of adults in each household is obtained in the survey to provide for a size-of-household correction. For each precinct so selected, the proportions in which the vote divided by parties in the previous national elections is computed. In 1980, for example, the percentage voting for Carter of the Carter-Ford vote in 1976 was computed for each precinct drawn into the sample. Since the precincts were drawn with probability proportional to size, the mean Carter percentage of the precincts in the sample served as a measure of the representativeness of the areas drawn. For example, in 1980 the mean Carter percentage for such a sample was 52%, the sample of precincts was two percentage points higher than the vote for Carter in 1976, when 50% voted for Carter. When such a bias is found to exist, a simple correction of the final estimate can be made, and the bias in the sample of precincts with respect to the previous election removed.

This is accomplished by means of a ratio estimate or regression estimate where the relationships between the past vote in each precinct and current preference is established. In the 1980 election, sample of precincts had about a 2 percentage point Democratic bias. Based upon the relationship between the actual vote in these precincts in 1976 and preference for Carter and Reagan in 1980, a 1 percentage point correction was applied to take into account the sample bias.

In addition, our sample was weighted by an algorithm which takes into account the latest estimates of age, sex, region and education division for the adult non-institutionalized population. This weighting has minimal effect upon the composition of the sample as is shown in the table on the following page.

In total, we interviewed a national sample of 3,509 on Thursday, Friday, and Saturday prior to the election. Interviews were obtained from all but 10 of the 362 precincts during this time. These 10 locations were examined to determine if they were systematically Republican or Democratic precincts, which they were not. Had they been, an estimate of this division of the vote would

have been made based upon prior surveys in these areas using a ratio adjustment.

TABLE 2.

	UNWEIGHTED PRECINCT SAMPLE	WEIGHTED PRECINCT SAMPLE	DIFFER- ENCE
	%	%	
TOTAL	100	100	
<u>SEX</u>			
Men	48.2	47.4	-.8
Women	51.8	52.6	+.8
<u>RACE</u>			
White	89.1	87.3	-1.8
Non-White	10.9	12.7	+1.8
<u>AGE</u>			
18-29 years	21.9	26.9	+5.0
30-49 years	36.9	35.4	-1.5
50 years and over	40.4	37.3	-3.1
<u>EDUCATION</u>			
Grade School	10.0	14.7	+4.7
High School	54.0	54.8	+.8
College	35.9	30.4	-5.5
<u>REGION</u>			
East	27.2	26.8	-.4
Midwest	27.9	26.9	-1.0
South	27.5	28.0	+.5
West	17.3	18.3	+1.0

Average Weight 2.0

Range 1.0 - 4.0

3) Preference Measurement - The Gallup method of obtaining candidate preferences is guided by a number of principles which have been established by our election experience. The overriding principle is that the process of obtaining preference from respondents should be as similar to the actual voting situation as possible. This dictates a number of procedures.

1. Question Positioning - We strongly believe that no specific candidate or issue evaluative question should be asked prior to measuring preference. To do so would run the risk that too much attention is being focused on one aspect of the voting decision. For example, in 1980, had we asked questions about the economy or perceptions of the candidates' abilities to handle this issue prior to candidate preference, we certainly would have taken the risk of focusing the respondent's attention to a Carter weakness. Similarly, had we asked questions about war and peace prior to preference, emphasis would have been placed on a Reagan weakness.

When the voter enters the booth to make the actual choice, he or she is not first asked to evaluate the candidates on "n" dimensions or to consider a range of national issues. We attempt to get as close to that actual process as we can.

2. A Secret Questioning - In our final pre-election surveys, preference is obtained by means

of secret questionnaire which is self-administered after 5 or 6 non-evaluative questions dealing with voter participation. The secret questionnaire has a number of advantages. It generally reduces the undecided to about 4% in national elections. This compares to about 15% in non-secret questioning without a leaner question. With a leaner question the non-secret questioning undecided will come down to about 7 or 8%, still appreciably above the undecided in a secret question. In using a variety of techniques, we have proven to our satisfaction at least, that the vast majority of undecideds are not truly undecided, but people who fall into the "reluctant to say" category. The more questions one asks, the lower the undecided becomes.

In each election, during September, we employ both secret and open questioning techniques using a split-sample design in national surveys. The comparison between responses to the secret questionnaire and non-secret questionnaire suggests that in a closed situation a small number of respondents give different responses than in a non-secret questioning situation. Paul K. Perry<sup>2</sup> in a recent review of his election methodology, wrote:

"This was particularly true in 1964 and 1972. In 1964 a comparison of nonsecret and secret responses revealed a hidden vote for Goldwater in nonsecret responses. Goldwater was stronger in the half of the sample using the secret ballot technique than in the half of the sample using the nonsecret method. The difference in his favor was of the order of 2 or 3 percentage points. In 1972 the sample comparison revealed a significant hidden preference for McGovern. In 1956 there was a small hidden preference for Stevenson in nonsecret responses. In 1976 Ford was stronger on the secret ballot than the nonsecret in the South. The difference was significant at the two sigma level. Outside the South the difference was not significant."

3. Turnout - It is pretty well established that distinguishing between voters and non-voters is a critical task in accurately assessing pre-election preferences. The Gallup method is in two phases. Our first objective is to make an estimate of the percentage of the eligible voting population who will vote. This is accomplished by means of a regression technique developed by Paul Perry and Irving Crespi, where the dependent variable is the percent of eligible voters who will participate in the election and the independent variables are two attitude questions measuring voter interest in the election and reported past voting behavior. The record of these forecasts in the last election are shown:

	GALLUP FORECAST OF THE PERCENTAGE OF ELIGIBLE ADULTS * CASTING VOTES	PERCENTAGE OF ELIGIBLE ADULTS WHO CAST VOTE
1980	55.8	53.9
1976	54.4	54.4
1972	56.8	55.7
1968	63.2	60.9

\*Those of voting age

The technique produces a reasonable approximation of the voting rate. The error contributed by using a slightly higher or lower approximation of turnout is minimal because the scale to which the rate is applied is not sensitive to small variations in rate.

The sorting of voters into the voting and non-voting categories is the second phase. At Gallup it is accomplished by a battery of nine questions which measure interest in politics, in general, in the particular election, awareness of the voting place, reported regularity of voting, and of course, intention to vote. Using a Guttman technique respondents are given a scale score which allows us to rank voters from those most likely to participate to those least likely to participate. A fair amount has been written about this technique so it will not be belabored here except to say that the technique has been developed on the basis of validating the relationship between the scale and actual behavior. After each election, we select a small sample of respondents for whom we go back to the precinct records to determine if they voted. Based upon this work, we have established the efficacy of the scale and a means of assessing the relative importance of each question.

Based upon our estimate of the turnout rate, the continuum of respondents is cut and we base our estimate of the likely vote above the cutting line.

These, then are the basic techniques of the Gallup method. Let's now examine them in specific regard to 1980, particularly relative to the presumptions about what led to the Reagan underestimate.

In examining the Gallup data there is little evidence to suggest that our handling of turnout was a major source of error. We estimated a turnout rate .56 compared to an actual rate of .54. As noted, turnout scales are not sufficiently sensitive to such small differences. In fact, had we used a .54 turnout ratio, the division of preferences would not have changed by as much as 1 percentage point.

As in past elections, we validated our turnout scale by going back to the actual voting record for a subsample of respondents. The results of this effort suggest that in 1980 we did as good a job as we had in the past in distinguishing between voter and non-voters. We find that of our likely voter sample, 78% actually did vote, which is about what had been achieved in previous elections. The validated study concludes that had we known with certainty who in our sample would have voted, we would have estimated a 4 percentage point margin Reagan margin rather than a 3% point margin -- still quite a way from the actual division of vote and the accuracy of past estimates. (TABLE 4)

Considering the response issue, the Gallup data shows no indications of the hidden Reagan vote which supposedly was a source of our problems. Here is the comparison between open and closed measurements in late September. (TABLE 5)

TABLE 4.  
A COMPARISON OF LIKELY VOTERS  
TO VALIDATED VOTERS

	Preferences Of** Likely Voters	Preferences Of Actual Voters*	
	%	%	
Carter	43.3	43.7	+0.4
Reagan	45.4	47.0	+1.6
Anderson	7.4	7.8	+0.4
Other	0.5	0.4	-0.1
Undecided	3.4	1.1	-2.3
	100.0	100.0	

\*Based on a validated subsample of 462 voters

\*\*Prior to precinct adjustment and allocation of undecided.

TABLE 5.  
PREFERENCES OF LIKELY VOTERS

	Non-Secret Questioning	Secret Questioning	Differ- ence
	%	%	
Carter	38.4	42.9	+4.5
Reagan	40.7	40.6	-.1
Anderson	12.5	12.7	+.2
Other/Undecided	8.4	3.8	-4.6

If anything, respondents were somewhat more reluctant to prefer Carter rather than Reagan in open questioning. This comparison relative to previous ones does not suggest a closet Reagan vote as it did for Goldwater in 1964 or even McGovern in 1972.

Turning to the undecided, we had a 3 percentage point undecided in our final survey. Contrary to the general impression, the undecided vote was no higher in 1980 than it was in past elections. The undecided was allocated 1.5% to Carter, .9% to Reagan and .6% to Anderson. This allocation was made primarily on the basis of monadic ratings of likelihood of voting for each candidate among a sample of undecideds from an independent survey. The residual undecided was so small that it cannot be taken really seriously as a major source of error. Had we divided them equally or even heavily weighted them to Reagan, the net result would have changed very little.

In looking at each of the steps in the process, we can certainly find small sources of error. But, the important point is that there have been comparable problems in past elections when we were so close to the mark. There is absolutely no evidence to suggest they were any more contributory to error in 1980 than in 1976, 1972, 1968, etc.

What was different about the election was not the problem of turnout, preference measurement, etc., but rather the course of this campaign. In past elections, polls taken immediately prior to the weekend before the election have been reflective of the division of the vote because the final week of the campaign, not to mention the final days of the campaigning, had been very uneventful, not dynamic as they were in 1980. All of the polling on the debate suggests that Reagan scored a sharp victory in Cleveland just a week prior to the election. The collapse of hostage negotiations after our interviewing had closed was the second major campaign event in less than 7 days. The Gallup trend itself shows preferences changing in that final week. Throughout the month of October a Carter momentum had been developing which was stopped cold and, in fact, reversed by the debate. (TABLE 6)

TABLE 6.  
THE GALLUP TREND

	Carter	Reagan	Anderson	Other/Un- decided
	%	%	%	%
1. Sept. 12-15	37	41	15	7
2. Oct. 10-12	42	45	8	5
3. Weekend Before Debate	45	42	9	4
4. Final Survey	43	46	7	4*
Gain 1 to 3	+8	+1	-8	
Gain 3 to 4	-2	+4	-1	

\*Undecided not allocated for comparative purposes.

As compared to past elections, the 1980 campaign was loaded at the back end. Our polls had shown during the entire campaign that voters were not strongly committed to their preferences. The events of the last week overlaid on the softness of preference created a situation in which the final published polls were being taken during a period when significant numbers of voters were in the process of changing their minds. The CBS/NY Times panel survey<sup>3</sup> strongly supports this notion as does our own data. In our final survey in past elections we found approximately 56% of like-

ly voters reporting that they were strongly committed to their choice just days before the election. In 1980, intensity of preference measures were sharply lower, which is indicative of the dynamic nature of that week. Overall, only 45% of all likely voters were strongly committed to their choice; but among Reagan supporters, 52% were strongly committed. This is about what Ford and Carter achieved in 1976. Anderson and Carter, on the other hand, who were to lose more ground, had much softer support, 44% and 30% respectively. (TABLE 7)

To a greater extent than in prior elections, in 1980 pollsters were measuring preference as attitudes were changing. The notion that since the final polls were taken a few days after the debate they should have captured the full impact of that event implies a very simple notion of attitude change. A major change preference does not occur uniformly -- all people who will change their preference or attitude as a result of an event such as the debate, will not do it at the same time. It is an evolving process.

To conclude, in our view, the failure of the polls to capture the magnitude of the Reagan victory is not the result of some major breakdown of polling methodology, but rather was a consequence of the unusual course of the campaign. Had we continued polling through the weekend, we are reasonably confident that we would have picked up the remainder of the trend line that we captured in our final survey.

1. Paul K. Perry, "Election Survey Procedures of of The Gallup Poll", Public Opinion Quarterly, Fall 1960, Volume 24

Paul K. Perry, Gallup Poll Election Survey Experience - 1950-1960", Public Opinion Quarterly, Spring 1962, Volume 26

Paul K. Perry, "Election Survey Methods", paper presented at Sixth Annual Forecasting Conference, American Statistical Association, New York Area Chapter, April 17, 1964

Paul K. Perry, "A Comparison of the Voting Preferences of Likely Voters and Likely Non-Voters", Public Opinion Quarterly, Volume 37, Spring 1973

Paul K. Perry, "Certain Problems in Election Survey Methodology", Public Opinion Quarterly, Fall 1979, Volume 43

2. Paul K. Perry, 1979, Ibid
3. CBS/The New York Times Poll, November 15, 1980

TABLE 7.

INTENSITY OF PREFERENCE IN FINAL GALLUP SURVEYS

	PERCENT WHO SAID:					TOTAL
	VERY STRONGLY	FAIRLY	NOT STRONGLY	DIDN'T MAKE CHOICE	DK	
1980	45	36	15	4	*	100
1976	52	32	12	3	1	100
1972	59	28	9	3	1	100
1968	56	30	11	3	1	100
<u>1980</u>						
REAGAN VOTER	52	35	13	-	*	100
CARTER VOTER	44	38	18	-	-	100
ANDERSON VOTER	30	45	25	-	-	100
<u>1976</u>						
CARTER VOTER	54	33	12	-	1	100
FORD VOTER	53	34	12	-	1	100
McCARTHY VOTER	32	34	34	-	-	100
<u>1972</u>						
NIXON VOTER	66	27	6	*	1	100
McGOVERN VOTER	52	34	13	*	1	100
<u>1968</u>						
NIXON VOTER	59	30	10	*	*	100
HUMPHREY VOTER	54	33	12	*	1	100
WALLACE VOTER	64	27	8	-	1	100