

# Creating a Benchmark Using On-Line Polls

By Richard Maisel, Katherine Robinson and Jan Werner

Business, government and the news media have developed an insatiable appetite for public opinion polls, most of them now administered by telephone to random samples of respondents. Telephone interviewing is considered the most cost-effective method for conducting surveys today, and technological advances have brought both telephone and sampling costs down. Still the interviewing process itself remains a labor-intensive, and thus costly, process.

At the same time, there is a widespread perception among survey researchers that telephone response rates are declining. More and more, we find individuals selected for telephone surveys resorting to call screening to avoid being reached, or simply refusing to be interviewed. Some researchers cite the increasing number of telephone surveys, along with the necessarily intrusive nature of telephone interviewing, as major factors contributing to this decline in response rates and the corollary increase in the cost of conducting survey research.

Interactive on-line services provide an inexpensive and efficient alternative to telephone interviewing. This alternative, however, is not without its drawbacks. On-line systems do not provide representative populations from which to draw samples, their respondents tend to be self-selected, and it isn't possible to accurately measure sampling error beyond the on-line service. For these reasons, survey researchers have until now avoided using on-line services as a vehicle for meaningful public opinion research.

Yet on-line services may lend themselves to alternative approaches that have shown great success in situations where it isn't feasible to conduct precise sample surveys, or where the cost of doing so

would be prohibitive. For example, many commercial researchers and political consultants rely on continuous longitudinal studies to track the movement of public opinion about specific topics. If it is possible to verify empirically the information gathered through on-line services by using data from other accepted sources, on-line results may then be given some credibility and thus be useful in decision-making processes.

In 1992, the Prodigy Services Company began a series of experiments to examine methods of collecting public

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opinion information using their on-line service. The latest of these experiments, which began in January 1993 and is still in progress, measures variations of public opinion over time for several topics frequently reported on in the press, including approval of President Clinton's performance in office.

Comparison of the movement of the Prodigy results against those of the Gallup Organization's regular polls over the past two years strongly suggests that, under the right conditions, and using proper procedures, on-line interviewing may in fact provide a useful source of public opinion information (see Figure 1).

## Background of the Prodigy Experiment

Prodigy is an on-line service intended to appeal to a family audience rather than business computer users. It is one of the largest on-line service providers, with 2 million members, of whom roughly 1.5 million are of voting age. Since using the service requires a personal computer, members tend to be more "upscale" than the general public. As a group, they are better-educated, of higher income, more often male, less often minority group members, and more often registered voters—particularly, registered Republicans.

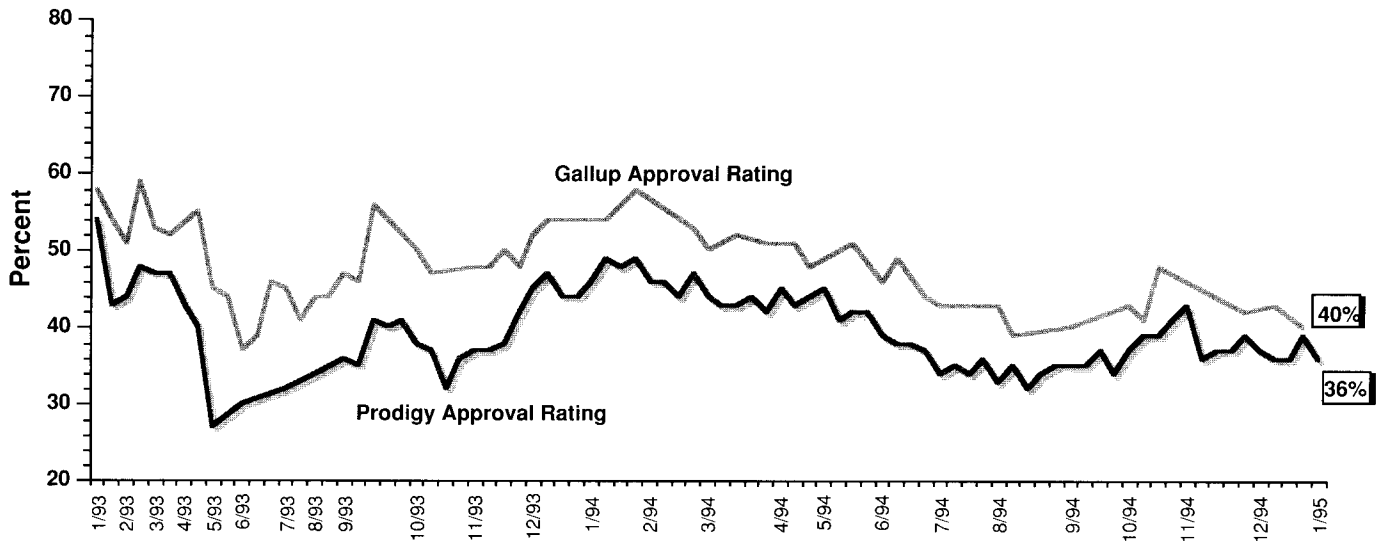
Prodigy conducts a large number of interactive polls, usually providing instant results on-line. This is a popular feature on the service, but the sample responding to each poll is entirely self-selected, and, consequently, results cannot be projected beyond them.

Interactive services, however, can contact members selectively, so the question was asked as to whether it would be possible to collect accurate information about the US population as a whole by drawing proper samples from the membership base and using electronic mail (E-Mail) to interview selected members.

To investigate this possibility, Prodigy commissioned two surveys from the Opinion Research Corporation (ORC) while running parallel polls on the service. The information gathered was used to develop a weighting scheme that could be applied to on-line polls to match their results with those of the ORC surveys. In a follow-up experiment, this weighting scheme was applied on election day to an on-line poll asking members how they had voted. The results were surprisingly good (equal to or better than most exit polls), and led to the current experiment.

**Figure 1**  
**Prodigy Presidential Ratings Compared to Gallup Poll Approval Scores**

**Question:** How would you rate the overall job Bill Clinton is doing as President... excellent, pretty good, only fair, poor, not sure (Prodigy)? Do you approve or disapprove of the way Bill Clinton is handling his job as President (Gallup)?



**Note:** Prodigy approval ratings are those responding “excellent” or “pretty good.”

**Source:** Surveys by Prodigy, latest that of January 4-10, 1995, and the Gallup Organization for *CNN/USA Today*, latest that of December 28, 1994-January 3, 1995.

### Creating a Benchmark

The experiment described here tracks the changes in public opinion over time using on-line surveys. The primary goal is to benchmark the on-line data using corresponding results obtained through established and accepted methodologies. Thus it was necessary to select topics for which information is available on a regular, or at least frequent, basis.

The topics chosen were presidential and congressional performance and overall perception of economic conditions in the United States. The Gallup Organization’s presidential approval ratings were selected as the datum against which to compare the Prodigy presidential results. The results of this comparison are presented above.<sup>1</sup> Note that the actual questions asked in the Prodigy E-Mail Poll are not identical to those in the Gallup surveys. Thus one should not compare the actual Prodigy findings directly with the specific results of those

surveys at any one moment, but only the variations in those results over time.

### Sample Selection

Sample sizes for the E-Mailings are chosen so as to collect approximately 6,000 completed surveys each month, or between 1,200 and 1,500 each week. A further design goal is to obtain two-thirds of the returns from respondents who have not been selected for the survey within the past six months, and one-third from respondents who had completed the survey four weeks previously. During the first four months of the experiment, surveys were mailed every other week; for the next four months, mailings went out monthly. Since September 1993, samples have been selected and surveys mailed on a weekly basis.

For billing purposes, Prodigy maintains a profile for each member with their address and, in most instances (over 92%), age and gender information, which

can be used to control some of the skewness of the membership’s demographics.

The size of each sample is designed to provide returns proportional to the demographics of the general population 18 years and over, rather than of Prodigy membership. Data from the 1990 US Census were used to determine correct sampling proportions for gender, geographical region and age.

All sample selection and survey processing is performed independently of the Prodigy service. At the beginning of each month, Prodigy provides a file containing the identification numbers of all currently paid-up members aged 18 and older (trial and complimentary memberships are not included) to an independent processing service. The only identifying information consists of the state of residence, age and gender of each member, so the anonymity of respondents is not compromised. Each week, a new sample is selected from this pool and sent back to Prodigy for the E-Mailing.

## Data Collection and Processing

Each selected identification number is sent an E-Mail message with an attached questionnaire. When members selected for the current survey sign on to the service, they are notified by an icon on the opening screen that there is new mail in their mailbox. This icon remains on the screen until the contents of the mailbox are examined or until the one-week expiration date of the E-Mail message, whichever comes first. Both message and questionnaire remain in the mailbox until the expiration date unless deleted by the recipient; if the member answers the survey more than once during that period, only the last response is collected for use in tabulating returns. If a member chooses to retain the message past its expiration date, any responses after that time are ignored.

For consistency, the same questionnaire is used each time. An introductory screen informs respondents that the survey will take less than five minutes to answer, and that no on-line charges will apply during the time taken to fill it out. Then, in order, come four economic outlook questions, the presidential and congressional performance questions, a single question on the respondent's voter registration and a screen asking for confirmation of the available profile information. The responses to each completed questionnaire are stored, and all surveys collected are forwarded to the independent processing service after the expiration date of the current mailing.

Surveys collected for each period are matched against the list selected in that week's sample and the last ques-

tionnaire obtained during the period for each responding member is retained. Any surveys for which either age or gender are unknown are dropped from further analysis. The remaining surveys are then weighted to bring their marginal proportions for age, gender, region and voter registration into agreement with those for the total US population.

## Examining the Results

Comparing the variations over time of the Prodigy findings against Gallup's, it is clear that they reflect the same underlying shifts in the public's perception of President Clinton's performance, even though the ratings at any given time are not strictly comparable. In

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many cases, changes in the Prodigy results appear to precede Gallup's slightly (possibly because Prodigy subscribers tend to be more news-aware than the general public).

It is often just as useful to know how opinion changes over time as to extract precise measurements at any given moment. The Prodigy E-Mail Poll provides regular tracking and a possible leading indicator as to changes in public opinion about presidential performance. Comparison with Gallup find-

ings suggest that this information has been reliable. While Gallup's results are sporadic, the Prodigy information is available on a weekly basis. By extension, one can expect the congressional performance tracking results to provide similar information on shifts in public opinion about the Congress, not widely available elsewhere.

This experiment demonstrates the value of on-line polling as an alternative source of public opinion information. As the difficulty and cost of obtaining *reliable* information using telephone interviewing increases—something that's happening today—alternative sources like on-line polling will become ever more important to the survey research community. While on-line polls cannot replace telephone interviews for individual "snapshots" of public opinion, they clearly can be used for tracking variations in opinion over time. They are likely to be far more cost-effective than telephone interviewing for this kind of survey and, because they are less intrusive, may even be more reliable.

Today, only a few service providers such as Prodigy have the ability to reach enough people to collect information this way. But as we move inexorably toward a "wired" nation, we can expect properly designed on-line surveys to become a major tool for opinion research.

## Endnote:

<sup>1</sup> At this time we have not fully analyzed the economic data, although initial comparisons with the Conference Board consumer confidence ratings show similar promise.

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