PRESIDENTIAL ADDRESS
SURVEY AND MARKET RESEARCH CONFRONT THEIR FUTURES ON THE WORLD WIDE WEB

JAMES R. BENIGER

Although I have been attending AAPOR's annual conferences for the past 23 years, over the past three days here in St. Louis, I have sensed a climate of thought quite unlike anything I had previously experienced at an AAPOR conference.

I can recall, for example, conferences following national elections whose outcomes had been called close to the mark by most of the major polling organizations. These conferences had an air of self-satisfaction about them—a sense of ''ain't surveys grand!''

I can also recall conferences filled with intellectual angst, as in: ''Focus groups are coming—can survey research be saved?'' And I can recall conferences with considerable personal angst, as in ''Computer-assisted telephone interviewing is coming—might I lose my job?''

What I sense here in St. Louis, however, at this, our fifty-third annual conference still in progress, is an atmosphere unprecedented but unmistakable, something like: ''The world is in flux, major changes are afoot, and I have little real sense of what the eventual outcome might be—whether the results of these changes will be mostly good or mostly bad, for me or for AAPOR.''

One culprit behind this prevailing air of tentative hesitation, caution, and uncertainty, it seems to me, is the sudden emergence of the World Wide Web, which has popped up here, there, and everywhere at this conference, often where least expected, like a poltergeist in the pantry.

This might be, of course, only the early arrival of ''millennial fever,'' a putative affliction which we all must be on guard against, once every thousand years. Nevertheless, I, at least, attribute the prevailing atmosphere here in St. Louis to another type of fever, World Wide Web fever, now spreading out of control, or so it would seem, worldwide.

As evidence, consider that, at Thursday night's opening plenary ses-

JAMES R. BENIGER is professor in the Annenberg School for Communication at the University of Southern California.

sion, ''The Market Research Industry in the Year 2010,'' Gordon Black, chairman and CEO of Harris Black International, reported: ''As we speak, the Internet is emerging as the fastest growing technology adoption in history.'' And he might well be right.

Dr. Black went on to report that what he termed ''Internet penetration'' among adults was only 9 percent three years ago, in 1995; up to 37 percent in his most recent poll; and to become an estimated 45 to 47 percent by the end of this year. In two more years, to the end of the year 2000, Dr. Black estimates that Internet penetration will exceed 60 percent. And even as he spoke to us, the hearings in Europe on the MCI-Worldcom merger reported that the Internet currently has some 100 million users worldwide, with Internet traffic now doubling every three months.

One important unknown in estimates like those of Gordon Black, of course, is the future of WebTV and other similar matings of TV and Web in a single family-entertainment-center appliance. Certainly here is one development which deserves the careful monitoring of everyone interested in mass media effects, survey research, and the dynamics of public opinion formation and change.

As for the Web's impact and influence on AAPOR itself, I do know, as the chair of our fiftieth anniversary conference in 1995, when Mosaic was still confined almost entirely to the computer centers of major research universities, and Netscape had just been released to the public, that many AAPOR members had not then even heard of the World Wide Web—and this just three years ago.

AAPOR's fiftieth anniversary conference had its own Web site, as some of you might recall, designed in Australia, without cost to us, by Sandy Tse of the University of South Australia, someone I'd met and knew only on-line through my posting of the conference's call for papers to various international Internet lists. Our conference Web site eventually included the full conference program and many of the abstracts, which thereby received global circulation, even though, ironically enough, only a few of those on that program could access them at the time.

How rapidly did things change! Only two years later, AAPOR itself had its own Web site, our current www.aapor.org. Over this past year, our site seems to have expanded almost by the week, through the efforts of many (for details, by sure to attend this afternoon's annual business meeting).

A similarly rapid discovery of the World Wide Web is reflected in the programs of our annual conferences. Our fiftieth anniversary conference had only a few papers and poster presentations devoted to the Web. Last year in Norfolk (VA), the topic became highly visible for the first time, the subject of my first ''Letter from the President'' column in last fall's *AAPOR Newsletter.*

While last year's program included eight papers devoted to the Internet and three to the World Wide Web, the program of our conference in progress here today includes, in addition to the opening plenary session already mentioned, nine papers and one seven-person panel devoted to the Internet, the Web, or both, not to mention Conference Chair Murray Edelman's graphic design for the printed program's cover, inspired by our actual AAPOR homepage, complete with the similarly inspired conference theme, ''Linking Us Together.''

Clearly, in only the past three years, the World Wide Web has elbowed its way from a virtual unknown among most AAPOR members to the very heart of our annual conference activities. Indeed, the Web has found an increasingly dominant place in the thinking, research, and professional activities of most AAPOR members.

Are these dramatic changes for the good? I think yes, absolutely. So rapid and yet considered a response to a rapidly changing technological environment, seemingly far removed from AAPOR's core concerns, can hardly be taken for granted, after all, in a 53-year-old professional association. AAPOR's ability to respond quickly to such change, which I've seen time and time again in my 23 years as a member, seems to me a major reason to belong to AAPOR—so much so that it might well be included on our published list of what we call ''benefits of membership.''

But what about my sense of our current conference's air of caution, hesitation, and uncertainty about the Web, and its implications for the future course of our research, and quite possibly of AAPOR itself? Are such concerns and cautions justified?

Here, at least to my mind, the answers are obvious: The World Wide Web is indeed a technological revolution in global human communication, both interpersonal and mass, of historic proportions. Our own fate in this still uncertain future, however, is entirely in our own hands, and entirely our own to make.

The World Wide Web could well rejuvenate AAPOR, and social science and commercial research more generally, I believe, as it has already invigorated so much of life in schools, on college campuses, in offices and homes. To agree that our fate is in our own hands, however, and thereby to take a firm stand against technological determinism, is also to concede that we might in fact choose a wrong direction. In such a case, the World Wide Web could well have a detrimental effect on the course of our research, and indeed could prove to be AAPOR's undoing.

It is because I believe that we all now stand at just this critical decision point—in our own research, our professional careers, and as AAPOR members—that I have chosen to make this the subject of my presidential address to you this afternoon.

To illustrate the most obvious wrong direction now evident among sur-

vey researchers, allow me to take, as an example, a point made by Gordon Black in his presentation at Thursday night's plenary session. It is a point which, ironically enough, I find unassailable, at least on its face.

As Dr. Black says of his firm's movement of telephone and household interviews to the World Wide Web: ''We estimate a variable cost reduction of at least 85 percent in the per completion cost of telephone data collection, and a more than 95 percent reduction compared with household surveys.''

I believe that I understand the nature of these cost savings, I believe them to be true savings, and I understand why Dr. Black is impressed by them, as indeed I am also impressed. Should survey researchers work to move the telephone and household interviews which they currently conduct to the World Wide Web, as quickly as possible, in order to realize such truly impressive savings in variable costs? Of course we should.

To say all this, however, is in no way to concede that what Gordon Black proposes is other than a stopgap measure, nor is it to concede that the questionnaire or interview formats will be the best formats—or even very good formats—for the most likely future equivalents of surveys on the World Wide Web. In the very near future, I believe, what Dr. Black proposed on Thursday night will be viewed as a step in the wrong direction, leading down a wrong path for survey researchers to take onto the World Wide Web.

To understand why this might be so, we must first return to the basics, to remind ourselves of what a survey is, and is not (you must forgive me for restating, for the record, what we all already know).

In its essence, a survey is a set of data collected on a relatively small number of individuals or cases, a sample from a much larger population, and from which the equivalent data for that population might be systematically and accurately inferred. For this reason, the laws of statistical inference, which are certain to hold on the World Wide Web, no less than on other planets and in other galaxies, are central to the conduct of a survey.

Because one of the several speakers at our opening plenary session, whom I shall not name, accused some unnamed among us as actually ''genuflecting''—his term—''before sampling theory,'' I feel compelled to say that, if this be genuflecting, then I want publicly to confess: I do indeed genuflect before the laws of statistical inference, much as I genuflect before, say, the laws of gravity. Even this analogy succumbs to gross understatement, however, because the laws of gravity must be modified, near the margins of the universe, where I have little doubt that the laws of statistical inference continue to hold.

What is not essential to a survey, by contrast, is any one particular means of collecting data. To be in the survey research business is to be in one particular branch of the data-collection and analysis business,

namely, the part which exploits sampling and statistical inference. This is not necessarily, however, to be in the questionnaire or interviewing business.

Why do I think it worthwhile to remind ourselves of such basics, as we confront the currently explosive growth of the World Wide Web? Because, as illustrated by Gordon Black's remarks on Thursday night, many survey researchers—indeed probably most survey researchers—think of the Web as little more than, as Dr. Black put it, a ''replacement technology'' for conducting what are today telephone and household interviews.

Several of the early commercial responses, based on just this view, might have been predicted: Already on the market are at least a half-dozen packaged systems for placing paper-and-pencil questionnaires on the Web, as I suspect tomorrow morning's panel session, ''Software and Methods for Conducting Internet Surveys,'' will better inform us. Already up on the Web are at least two sites (www.opendebate.com and www.virtua.com/voice) which allow anyone capable of reaching them to establish her own quite impressive-looking Web equivalents of call-in polls.

By these and countless other similar means, the entry costs to mounting at least seemingly impressive global survey operations have thus been rendered affordable by even the home hobbyist—perhaps by especially the home hobbyist. Thus has the era of survey clutter already begun on the Web (not even to mention the many major print and broadcast media already conducting de facto call-in ''polls'' there). Good luck to any serious survey firms which pin much of their futures on the hope of being heard for long above the mounting background noise and confusion of this swelling tide of amateur and slapdash pseudopolls.

There is good news, however, which I have already mentioned: The survey research business is not necessarily the questionnaire or the interviewing business, but rather a business of data collection and analysis. The World Wide Web, being itself nothing more than, in fact, a global web, is one of increasingly growing and interrelated data, almost all of it on individuals, and each day a substantially greater number of individuals at that. As such, the Web is the ideal environment in which to conduct survey research—an environment which would have been beyond the wildest dreams, the wildest fantasies, of any one of us AAPOR members even five years ago.

Additional good news: almost all of the information traditionally gathered via survey instruments is now or soon will be available on the Web, including complete and detailed data on individual purchases of a rapidly growing array of products and services, data on individual attention to a wide range of mass media, including newspapers, magazines and books, video clips of breaking news, audio broadcasts, video games, and pornography (to mention but a few), and visits to sites associated with political

parties, special interest groups and political movements, and particular issues of public policy.

The one exception is data internal to the individual himself, including attitudes and opinions on breaking news, or on related issues or policy questions, and nonspecific consumer attitudes and opinions on hypothetical goods and services, or ones not yet available for purchase. Aside from such types of traditional survey data, however, which will still have to be gathered via miniquestionnaires, usually with far fewer questions than on the standard survey instruments in use today, all other information is likely, in my view, to be sold by individuals and purchased by researchers, via the Internet, but of course.

Few useful tasks will be better suited to the unprecedented global data-processing power of the World Wide Web than that of keeping track of countless and never-ending financial transactions, including those involving only fractions of a cent (as might well be the case for certain data points in future survey research). Lingering problems concerning the security of such transactions have at least shown themselves to be solvable in theory, and with resolve.

The intellectual property rights of each individual to the data on his or her own private life will remain of paramount importance, of course, and AAPOR certainly ought to continue to champion such rights, in my opinion. Most sales of such rights, via the Internet and the World Wide Web, are likely to be for a single use only, with new permissions and payments required for extensions to other data-collection efforts. Each individual subject will need to be extended the usual guarantees of the confidentiality of his or her data set, of course, just as in today's studies in the not-yet-virtualized world in which we, in fact, actually live.

To underscore the key change implied by what I have said thus far: survey and market research on the World Wide Web are going to become grounded less and less in instrument-based measures of respondents' self-reports of behavior and self-expressed attitudes and opinions; such research is going to become more and more based on the same subject's actual behavior, as recorded by the tracks left behind by such behavior on the Web, or in the future cyberspace beyond the Web.

Those of you who, like me, are increasingly inundated by the junk mail, automated phone calls, and Internet spams obviously based on just such trails, which we have already left behind on the Web, will already know exactly what I mean. The very same trails can be put to much more efficient and socially redeeming use, however, toward the understanding of consumer, citizen, and voter behavior—AAPOR's more traditional research concerns.

In this same context, I foresee a future, to illustrate with just one example, in which people will be able to work their way off of welfare by answering questions for researchers, at home or in the local public library,

via the World Wide Web. It will then be left to methodologists, of course, to determine how such respondents might be folded into the more general mix of nonrefusals—if at all—for any particular study.

However the future course of survey and market research is altered by the dramatic appearance and explosive growth of the World Wide Web, the Web itself will surely present an important new subject—unto itself—for our increased understanding of human social behavior.

Despite the often radically different nature of life lived on the Web, as opposed to without the Web or before the Web, once we are on the Web we remain human nevertheless. One result is that most countercultural hopes for the Web have already been dashed. As the Web becomes a commonplace of middle- and lower-middle-class households, Web surfing increasingly becomes just another evening and weekend activity, an alternative to television, a place to shop or browse, to chat, form groups, enrage or seduce one another—not to mention yet another aid to children with their homework. Surely such a medium promises so many new insights, into many of our most essential questions of research survey and market, social and behavioral, that it would be a pity to treat the Web as merely one ''replacement technology'' for conducting what are today telephone and household interviews.

In making this case for the Web as the proper object of our research and theory, in its own right, I merely echo the words of the founding editors of our association's journal, the *Public Opinion Quarterly*. Their three-page ''Editorial Foreword'' which introduced the first issue, in January 1937, nine years before AAPOR's first conference, began with these words: ''A new situation has arisen throughout the world, created by the spread of literacy among the people and the miraculous improvement of the means of communication . . . now, for the first time in history, we are confronted nearly everywhere by mass opinion as the final determinant of political, and economic, action.''

As examples of this ''miraculous improvement of the means of communication,'' the editors went on to list all of the modern mass media before the Internet and World Wide Web—namely ''advertising, public relations, press, radio, motion pictures''—with but one exception: television. In the 40 years between 1950 and 1990, the topic of television inspired no fewer than 120 entries in the subject index to *POQ* at AAPOR's Web site (www.aapor.org), which amounts to three articles or comments for every four issues of the journal.

In the light of this tradition, it is not difficult to imagine how much the founding editors, now no longer with us, might have been rejuvenated anew by the Internet and the World Wide Web, only the second major ''miraculous improvement of the means of communication'' in the nearly 62 years since their launch of *POQ*.

Amid the prevailing atmosphere of tentative hesitation, caution, and

uncertainty which I find pervading this conference, will we be up to carrying on the challenge of exogenous technological change—now in the form of the World Wide Web—which has energized our field, our association, and our journal for at least half a century?

To capture and motivate the importance of this decision point, in perhaps blunter terms than I ought to use here, let me simply tell you how I see it in my own mind: if AAPOR does not survive to see its one hundredth annual conference, or survive with anything like the status which we now enjoy, I predict that it will also not survive to see its seventieth annual conference—17 years from today.

In other words, the Web's challenge to AAPOR, and indeed to all individuals and commercial firms in related fields, is both immediate and short term: survive the first 17 years, more or less, and we will survive (at least the disruption of our professional or business lives) for the full 100 years.

The ''immediate'' part is the bad news, of course; the ''short'' part is the good news. Part of my challenge to us here today is to suggest that we accept the immediate part as itself a challenge, but no cause to panic. But, first, why is this challenge immediate, and why is it short?

It is immediate because, although the World Wide Web is, for all practical purposes, only four or five years old, its growth—as Gordon Black's data suggest as well as any others—must rank among the faster for a technological adoption—certainly of its global scope—as any in recorded history. This also makes it short, because we are already moving rapidly up the steep, almost vertical slope of an ogive (or S-curve) of diffusion. Hence the key to success here, in our competition with other contenders, also depends on the factors I describe as both immediate and short.

Immediacy is important because, in competitive models of social change, the sooner any actor begins up the diffusion curve, the greater are her chances of finishing higher at the top.

Short is the period of most intense competition, for the World Wide Web, because its ogive of diffusion is excessively steep. Few changes—in status, ranking, market share, or whatever—occur near the bottom of the curve, where such orderings are still largely set in past tradition. Similarly, few changes in status, ranking, or market share occur near the top of the curve, where such orderings are increasingly restabilized and fixed.

Hence the key to success, as in any competitive model of acute social change, is to act as quickly as possible, with an expenditure of energy proportionate to the acceleration or deceleration of the curve. That is to say, start immediately, work hardest at the beginning of the curve, through the moment of its greatest acceleration, and least hard at the end. This same strategy is partly but incompletely captured by the once popular six-word slogan, ''Get there firstest with the mostest.''

Will AAPOR, and our membership, be able to do this? We have raised the appropriate questions, at each of our past three conferences, and we

are raising them again here, at our current conference in progress. I am also raising them with you this afternoon, in the hope that we will continue to talk about them, today, tonight, tomorrow morning, and for as long as it might be necessary or useful.

AAPOR's ability to respond rapidly to such change, as I've already said, seems to me a major reason to belong to AAPOR. My own continuing interest in professional associations and journals will likely hinge on this point, as I expect will AAPOR's continued success, positioned, as it is, among professional associations, with members drawn almost equally from the academic, commercial, and the governmental and other nonprofit sectors.

How might we go wrong? The greatest immediate danger, it seems to me, is to be lulled into thinking that any one of us is in the questionnaire or interviewing business, rather than in the business of data collection and analysis. Or, to restate the same point from the opposite direction, to be lulled into thinking that our clients are purchasing the answers to survey questions, rather than whatever data and insights might be most useful to assist in their product design and positioning, advertising and marketing, public relations and long-term planning.

Once so lulled, it would be relatively easy, it seems to me, to be seduced by the variable cost reductions of 85 to 95 percent or more in per-completion costs available on the Web, compared to those of telephone and household interviews. This Web strategy would be competitive in the short term, but not in the long run, at least not against competitors investing in the Web's even more promising new potential: the power of interconnectivity, storage, and processing of data inherent in its very structure.

To appreciate the ultimate folly of the short-term approach, consider that several of the packaged systems already on the market for placing paper-and-pencil instruments on the Web enable one to add computer animation to the cover of an on-line questionnaire, possibly to entice respondents to participate. Those of you old enough to recall Hollerith cards, keypunch machines, and card sorters, as do I, will certainly smile to think that this processing power of the Web, sufficient to support computer animation without undue notice, would be used merely to decorate the outside of a nineteenth-century data-collection device (the word ''questionnaire'' dates from 1899; the device itself is more than a decade older), rather than to update the power of data collection, processing, and analysis available for free to users in the structure of the Web itself.

Such data-processing power might be better utilized, for example, to monitor the behavior of subjects on the Web, with their continually compensated consent, but of course. Such monitoring might be accomplished by means of the now well-known Web cookie, for example, a topic which we extensively discussed on AAPORNET this past year, although similar

but more sophisticated means might easily be imagined. The data-processing potential of the Web might also be put to running the global system of continuous electronic agreement securing, rights obtaining, confidentiality assuring, and compensation which I have already discussed.

Another possibly fruitful use of the processing power of the Web might found in the idea of personal agents, loosed on the Internet to do one's bidding, in this case the collection of behavioral and other data on individual subjects (with their compensated permission, of course). Subjects might themselves have agents programmed to respond to questions just as they would themselves, possibly agents supplied and programmed through the cumulative or collaborative efforts of survey and market researchers themselves.

An early test of this idea came at last year's conference in Norfolk, during the late Sunday morning debate, ''CASIC: Brave New World or Death Knell for Survey Research,'' at which I half-facetiously announced that I had programmed an agent to answer all on-line surveys for me, an agent which would either faithfully give my own responses to those questions I could both anticipate in advance and identify simply or else reply with ''don't know'' or ''no response.'' When I asked the packed room, which included many from the International Field Directors and Field Technologies Conference (joint sponsor of the session), who among us would accept data from my agent in their surveys, more than a dozen hands shot up.

Despite all of the Web's breathtaking possibilities for new methods of data collection and analysis, however, I still suspect that its greatest impact upon our collective subject matter of study, over AAPOR's second half-century, will come as an entirely new and radically different arena in which to witness, study, and hope to understand what interests us most about one another: how we form our attitudes and opinions, are influenced by mass media and by each other, make decisions as consumers and as voters, and take positions on questions of public policy and national and international concern. It is in areas like these, involving the traditional and most basic questions of social and behavioral science, that I think the Web holds the greatest potential contributions for the collective work which we, collectively, hold most dear.

Today no professional association is better positioned than is AAPOR to lead the effort to exploit the Internet and the World Wide Web toward such ends. The longer we delay, however, in order to pursue much cheaper ways to implement methods in fact made obsolete by the Web itself, the more we will lose ground to those who do not initially share any of our natural advantages. The single advantage held by our competition—now mostly in college, graduate school, small start-up firms, or even high school—is that it will have grown up knowing no world which did not have an Internet, and more recently a Web.

If we begin today, it will much easier for us to learn what the competition knows than for it to learn what we already know. But every day we waste moving instruments from telephone interviews to the Web is a day's advantage lost, in my opinion. I'd like to see AAPOR pioneer the new survey research, as it did the old. How we might do this is for all of us to decide, collectively, once we decide—also collectively—that this is what we must do.