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**Quality issues in online research**

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**Published: Journal of Advertising Research  
June 2007**

**Abstract**

Online polls and surveys using volunteer panels have grabbed a large slice of the research data collection market largely because they offer fast and cost effective research solutions. Concerns over the level of internet penetration and the use of volunteer panels have in many cases been set aside, as has research evidence showing sharp differences between the results of online and conventional telephone and face-to-face surveys.

We set out to find effective weighting systems that would bring the results of on-line surveys into line with telephone and other large scale random surveys. Disappointingly, we found that the differences could not be removed by weighting by demographics, newspaper readership or by using attitudinal weighting variables. Instead, we found evidence of significant and disturbing mode effects that seem to arise largely because panel members are primarily motivated to participate in surveys by the money they hope to earn, and in some cases seem to expend little time and energy doing so.

The paper suggests treating panel members as valued employees, appropriately paid for carefully considered answers and aware they are subject to rigorous quality control procedures. These procedures are designed to weed out panel members who do not play fair, and in this regard the paper sets out some alternative strategies that might be employed.

In November 2005 ICM conducted two separate research studies, one on issues surrounding crime and punishment and the other including questions on taxation and government spending. In both cases the questions were asked simultaneously of a random sample contacted by telephone and an online panel. The surveys included questions also asked on other large scale authoritative research studies conducted in the UK, such as the British Crime Survey and the British Social Attitudes Survey.

Like many research projects the results were weighted to be representative of all adults by a range of demographic and consumption variables; the implicit assumption being that demographic balance is all that is required to ensure that answers to other questions also reflect the views of all adults.

Where results could be compared to other authoritative research projects we found a much closer match between random probability surveys and telephone polls than for the online results. Over all the questions, a puzzling picture emerges however; some results lie close to those obtained by telephone, while on many other important questions the scores are very different.

These results may not surprise some online researchers who have long accepted that demographic weighting is insufficient to make an online poll match results obtained by other research methods. One solution, practiced by YouGov in the UK is to weight by newspaper readership as an indicator of attitudes more generally. We found this weighting had almost no effect on the data.

We also tried attitudinal weighting. We reasoned that attitudinal weighting is likely to be most effective if the variables selected are directly linked to the topic of the survey. By weighting the results of certain key questions asked online to those obtained by telephone we hoped to bring the two data sets into line. Unfortunately, we found that the effects were limited to other questions closely linked to the weighting variable, and that the effect elsewhere within the broader topics of crime and punishment, taxation and spending was at best, marginal.

The main difficulty is that the relationships one might expect to lie within the data sets do not exist, reflecting what most social researchers already know - that people do not generally hold views that are necessarily consistent even within topic areas. For attitudinal weighting to work we would require much more consistency in such relationships than we have found.

If attitudinal weighting does not work, even when the weighting variables used lie specifically within the survey topic area, it is not surprising that newspaper readership does not work (being a proxy variable for some attitudinal dimensions) and unlikely that attitudinal weighting based on other variables not directly linked to the survey topic will be effective either.

For a full explanation of the research and the findings in detail please see "Developing Reliable Online Polls", Sparrow, International Journal of Market Research (IJMR) Vol 46 Issue 6.

## **Why?**

Some people suggest that the online population is simply different to the offline population. Others may argue that the use of (largely) volunteer panels has a distorting effect; while others suggest that results are sensitive to the mode by which the interview is obtained.

### 1) The online population

We extracted from the telephone sample those with access to the internet and weighted those respondents to be representative of all adults. Having done so we get results that are very similar to those obtained from the whole telephone sample (i.e including non internet accessible respondents). The fact that only 65% or so of the UK population has access to the internet access is not, itself, a factor that distorts responses to attitudinal questions.

### 2) Panel effects

Of course, almost all online research is conducted among people who volunteer to participate in panels and receive some reward, usually a straightforward payment for the time expended. Some panel providers claim the motivation is primarily the desire to participate in interesting and challenging issues, and that incentives are mere tokens of appreciation. Nevertheless when asked to choose between a more interesting survey that offers no reward and a less interesting survey paying £2, four in five of our online panellists opted for the latter, confirming that the desire to make money out of answering survey questions is the dominant motivation rather than a desire to register opinions.

If money is the primary motivation for some panel members it will not make a great deal of sense to them to limit participation to one or two panels, rather, such people will be tempted to join several panels thereby maximising income from this activity. And this indeed does seem to be the case. Analysis by comScore Networks in the US presented at CASRO in October 2006 by Gian Fulgoni suggest that people constituting 1% of the top ten US online survey panels account for 34% of the questionnaires completed.

Overall, the payment of incentives changes the relationship between the pollster and the respondents. An individual telephoned out of the blue and asked for their views does so simply to help us gauge the attitudes of people generally. There is no other benefit to them. Many online panellists on the other hand are engaged in an exchange of time for money. In such a relationship the temptation is to expend as little time or mental energy as possible for the fee offered and such tendencies are likely to be most pronounced among professional respondents.

### 3) Mode effects

To test for mode effects we re-contacted 500 of our online respondents by telephone 3 months after the original interviews had been conducted. We asked a selection of the questions again. Astoundingly, the answers given were much closer to the results of the original telephone survey than were their original online responses. On the face of it this suggests that on many questions a large element of the discrepancy between the online and telephone methods can be ascribed to mode effects.

### **Possible explanations ....**

- a) The data might be taken as proof that people give more socially acceptable responses when asked by an interviewer but say what they really think online. People may, for example have far less confidence in the British criminal justice system than they are prepared to divulge to an interviewer. But this does not explain the differences observed on more straightforward questions about the respondent's own recent experiences such as whether they have felt threatened in the last year. Why should the results to that question asked by telephone be almost half the level recorded by the same people online?
- b) A wealth of comparative testing in the US by Don Dillman and others suggests that self completion questionnaire layout itself has a significant impact on the answers given. Even small design changes in the layout of answer codes result in substantially different answers. This is particularly true of online surveys which afford almost limitless possibilities for screen design and layout.
- c) The research also finds discrepancies between the results obtained online and by telephone that arise out of the length of time respondents spend answering the questions. By telephone, the surveys took between 6 and 7 minutes to conduct, online respondents took around a minute less. That difference may not be significant, but we did find a great degree of variation around the average. Online, 31% took less than 5 minutes to answer the crime and punishment questions and 44% took less than 5 minutes on the tax and spend questions.

If we compare the results obtained from the recall interviews with those originally given we see an average 10% shift in answers given by those who originally spent less than 4 minutes answering the questions online, twice the shift observed among those who spent 6 minutes or more online.

Obviously any effects arising out of the way each question and answer code appears on screen is likely to be more noticeable among those who are expending little time and energy on the survey questions. Mode does indeed offer an explanation for the discrepancies between our two test surveys, but mode effects are clearly not limited only to the absence of an interviewer.

### **Mode effect or panel effect?**

If the results obtained from online panellists when interviewed by telephone are similar to the results obtained from a random telephone sample, the conclusion must be that these two sets of people share similar views on social issues. The problems arise out of the research methods themselves, with particular problems being caused by a combination of mode effects and incentives.

Our research suggests that the presence of an interviewer regulates the length of time respondents can spend thinking about a question, as informants cannot cut an interviewer short, and a long pause for reflection on the phone or face-to-face will seem awkward. Respondents are encouraged to concentrate on the question for the simple reason that they will not want to give answers the interviewer is likely to think are silly or inconsistent.

Presently, with most online surveys, there is no consequence for the respondent arising out of taking the most casual attitude to answering the questions. Each answer is accepted by the computer no matter what it is, how consistent it is with previous answers or how quickly it is entered. Respondents are thanked at the end, with the survey fee being added to their account. Rather than thinking more about how they feel on political and social issues, the survey method encourages them to think less, and give knee-jerk responses rather than

more considered views. These tendencies are likely to be strongest among those motivated primarily by the chance to earn money or win prizes.

### **What can we do about it?**

Online research and panel providers could seek to recruit panellists from sources not used by others, thereby minimising the number of professional panellists used. Given the competition in the market it is unlikely that any good source would be a secret for long, and unproductive sources are likely to be expensive. In any event, virgin panellists are unlikely to remain so for long, once they realise that there is more money to be earned by joining several panels

Some have suggested that incentives should be minimised, thereby discouraging those motivated by the chance to earn money from completing online surveys. The problem is that money is the primary motivation. This course of action is therefore likely to lead to a rapid drop-off in panel membership, while encouraging those who remain, to race through questions even more quickly in order to maintain an adequate rate of pay. In any event, I find it hard to believe we will get considered responses from people who are in many cases already paid rates well below the statutory minimum wage!

Instead, I believe we should engage panel members on a different basis altogether. Being a panel member, motivated by the chance to earn money out of online surveys does not, in itself invalidate carefully considered responses to survey questions on a wide range of issues. Indeed our research suggests they are similar, in terms of their outlook and opinions, to others. But these people have to be regarded as valued employees, rewarded properly for their carefully considered responses, and an undertaking by respondents to play fair in this regard should be a condition of membership of a panel. It should be clear to them that we have quality control procedures and that poor quality responses a) cannot be used by us and b) jeopardise the work we give them. These quality control procedures should include.....

Methods to ensure that panel members spend at least as much time looking at questions online as they would have to spend listening to an interviewer read them out. In some cases respondents who then spend even more time considering their response may answer differently to those in any interviewer administered survey, and that deliberation may both change and improve data quality. At present no such claim could be made and indeed the opposite may apply.

While we can stop panellists racing through questionnaires we must also ensure they are paying attention to the questions. It is certainly possible to introduce simple check questions, to catch respondents who give contradictory answers, indicating they are not taking the task seriously.

We could re-ask demographic or key consumption questions (age, income, tenure, car ownership etc) to find those who change their answers. Or check postal address information against other databases

Most online surveys are presented as typed questions and answer lists of the most basic format. Data quality may be enhanced by devising on-screen layouts that engage the respondent or inadvertently encourage respondents towards certain answer codes. There are limitless possibilities, but experimentation may lead each company to devise a house style. Using that style will give answers to online surveys that are at least consistent with other research done by that same organisation.

The dilemma for the online research specialists is that they have, hitherto, sold online research as a cheaper, faster alternative to traditional research methods. The aim of sound research on the other hand suggests that online researchers should be investing more in carefully considered and constructed web page question design, and appropriate incentives and quality control measures to ensure panellists give careful thought and attention to the task.

**Nick Sparrow is managing director of ICM Research. He has been conducting political opinion polls for The Guardian and other media organisations since 1984 and is an industry acknowledged expert on political opinion research. He won the Market Research Society Silver Medal for his work on the development of accurate opinion research, and was pollster for the Conservative Party from 1996 to 2003.**

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