

Authors: Christoph Irmer (ODC Services GmbH), Olaf Wenzel (Skopos GmbH & Co. KG), Mathias Peichl (ODC Services GmbH)

Two determinants of panel quality: panel overlap and learning effects on panelists

Starting point

Various attributes may be used to assess the quality of an online panel. The aim of this study was to examine two specific attributes which determine panel quality in particular:

Panel overlap

Panel overlap is the term used to describe individual panelists' membership in several panels. This firstly presents a major problem for panel providers and panel users as it is not possible to determine with any certainty whether and how frequently individuals are being/have been surveyed within a particular time period or on a particular subject. Furthermore, it may be argued that the answering behaviour of test persons who are registered in several panels is negatively affected, since these individuals may potentially only be registered in several panels due to the incentives offered.

False answers due to learning effect

This refers to the assumption that users who have wide experience with online questionnaires could attempt to choose their answers in such a way as to increase the likelihood that they will be deemed to belong to the desired target group. This prevents market researchers from obtaining meaningful and valid data.

Problem in the survey

Within the framework of a survey among participants in the www.opinion-people.com panel family, we attempted, using two special surveying techniques, to obtain solutions to these two aspects. One cannot expect that sensitive questions will be answered truthfully in all cases. For instance, when asked an open question regarding false answers, panelists could refuse to answer the question or give a false answer due to fear of sanctions, such as exclusion from the panel, for example. For this reason, we used the **Randomized Response Technique (RRT)** as well as the **Unmatched Count Technique (UCT)**, in order to be able to better assess the base rates of the behaviour we are interested in.

The techniques

Unmatched Count Technique

With this technique the users are divided into two groups. Both groups receive lists containing several statements. They do not have to indicate which statements exactly apply to them, but only how many of them apply. The lists differ in that one list only contains innocuous statements; the sensitive statement is added to the other list. Therefore, one of the two lists contains the additional, sensitive statement. If the average numbers of statements given are then compared, the sensitive statement accounts for the higher average value of the list containing the sensitive statement.

The following lists were used:

Group A:

- I go shopping for drinks once a week.
- I don't have any brothers or sisters.
- My birthday is on an odd day.
- *In online interviews I have ticked wrong answers now and then in order to progress.*
- My PC is more than 6 months old.

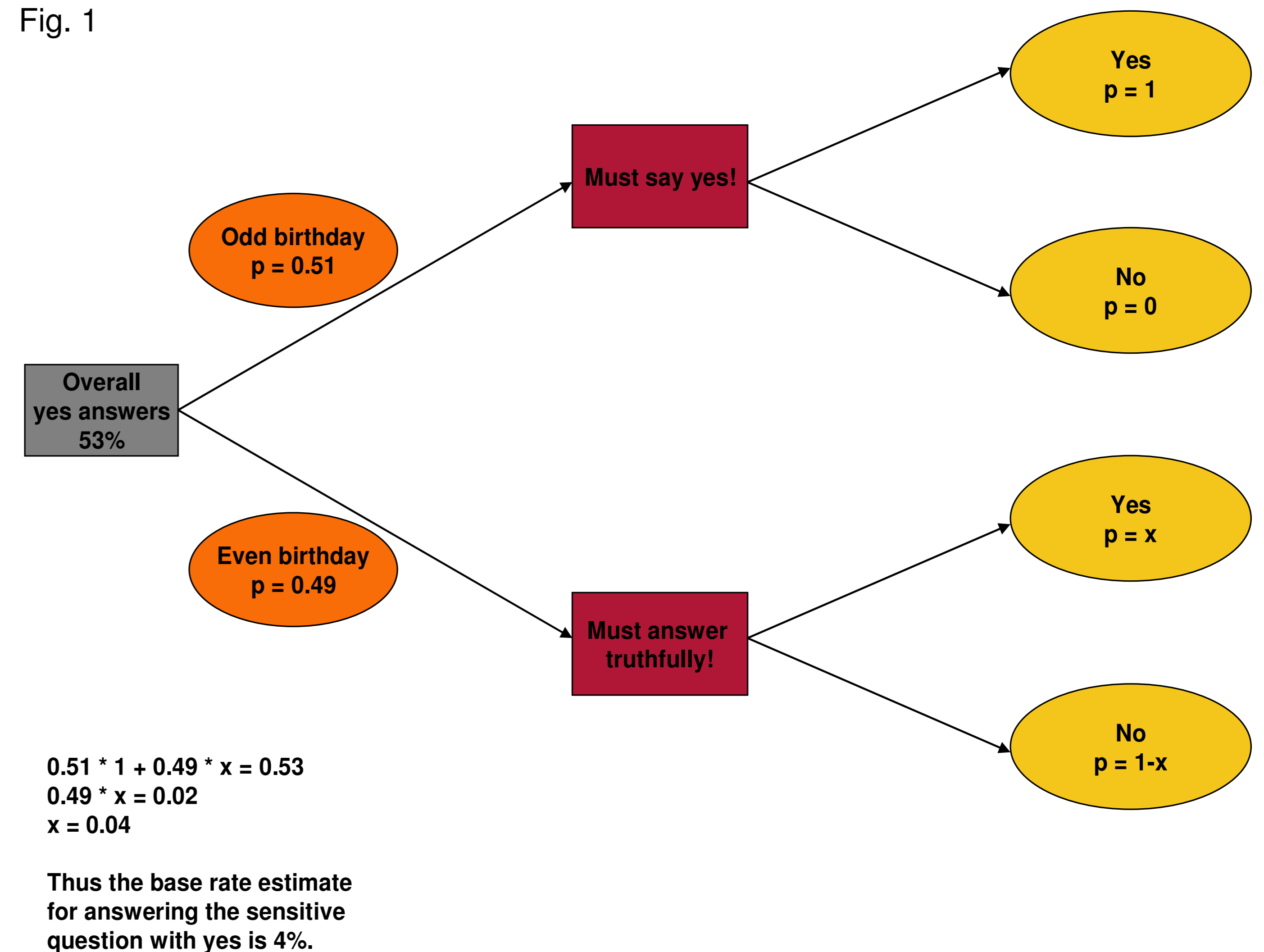
Group B:

- I go shopping for drinks once a week.
- I don't have any brothers or sisters.
- My birthday is on an odd day.
- My PC is more than 6 months old.

Randomized Response Technique

This involves using a random mechanism prior to asking a sensitive question (the probability of each result must be known). Depending on the outcome, the user must either answer "Yes" in any case or answer the question truthfully. Thus the user can always refer to the random mechanism and it is no longer possible to keep track of whether they had to say "Yes" or were able to answer truthfully.

Fig. 1



In our case, the panelists were asked whether their birthday was on an even or an odd day. If, for example, their birthday was on 15 June, they should have answered yes to the question in any case; if their birthday was on 18 April, they should have answered the question truthfully. The distribution here is known: 49% of users should have birthdays on an even day. It is then possible to calculate the proportion of panelists who answered truthfully. This enables us to disregard the possibility of false answers.

Results

We did not only attempt to gain an overview of distribution within the panel, but also to identify differences between individual recruiting methods. We differentiated between the following entry routes:

Online: users from online lists who were recruited by email.

Offline: users from offline lists who were recruited by email.

The question regarding false answers should be answered with the aid of UCT. At 6%, the proportion of panelists who have given a false answer at some point is relatively low. It is possible to recognise larger differences between the different entry routes.

Fig. 2:

	Overall	Online	Offline
Biased answers (UCT)	0.060	0.090	0.010

Cases of membership in several panels were measured with RRT and amount to 4% across the whole panel. There are large differences between recruiting methods in this area, with significantly higher rates of panel overlap among users who are recruited online.

Fig. 3:

	Overall	Online	Offline
Panel overlap (RRT)	0.040	0.060	0.039

At 5%, the results with respect to both panel overlap and false answers are not statistically significant. We carried out 707 interviews in total, but the degree of panel overlap and false answers is relatively low.