Cover analysis: a new tool for monitoring peoplemeter panels

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Peoplemeter technology has revolutionised both the measurement and use of television audience data. Compared with the diary measurement system, the peoplemeter is better at measuring cable and satellite channels; it also measures VCR recording and playback; and it even gives minute by minute ratings. Yet with all this increased sophistication there are still lingering doubts about the human involvement in this technology. Respondents in peoplemeter panels are required to press a button on a remote control to 'log in and log out'. Over time, it is expected that there may be a drop in button-pushing diligence due to reduced participation interest. This article presents a simple idea that is used to monitor button-pushing behaviour, and therefore reported viewing levels, of peoplemeter panellists. If someone's reported viewing level drops significantly below what is expected of people of similar type then a telephone call is made to investigate the reason. This panel management tool is now used for AGB McNair's peoplemeter television panel in New Zealand.

Panellist fatigue
Danaher & Heed (1992) reported in *ADMAP* the results of a coincidental survey in which 92% of the 365 panellists called at random had pushed their buttons correctly. This survey was repeated the following year and a similarly high compliance level was found. Despite many such compliance studies conducted around the world, all showing high compliance levels, there are still nagging doubts about the participation enthusiasm of panellists as time goes on. To some extent this is quantified by the coincidental surveys, which show that about 8% of panellists are not pushing their buttons correctly. Some of these non-compliant people may be less enthusiastic in their button-pushing due to the length of time they have been on the panel. In New Zealand, the majority of panellists have been on the panel for nearly three years, in fact, since the panel first began operating. There is no obvious evidence of button pushing fatigue from the 'older' panellists but it still seems worthwhile having a check on personal viewing levels in case there is a sudden or gradual decline in viewing.

Homes that no longer want to participate often ask to be taken off the panel so to some extent the panel is self-regulating. In addition, blatant cases of non-button pushing result in removal of the home from the panel by the panel manager. However, a reduction in one person's reported viewing may not be noticed by the panel manager as the viewing for the whole home seems normal.

Cover analysis
To monitor panellists' viewing levels more closely, AGB UK developed an idea they called 'Cover analysis'. The method, originally conceived by Jonathan Jephcott while at AGB, is simple. It is intended to establish norms of television viewing for similar

groups of panellists and highlight any panellists who deviate significantly from the norm.

The 'Cover' for a panellist is defined as

Cover = hours of viewing of panellist/total hours of viewing by all members of the panellist's household * 100%

Alternatively, the denominator may be defined as 'total hours of tuning on all sets in the panellist's household'. Since all that is required is a comparative measure either method is satisfactory and the former is easier to compute.

Four weeks of data were used to calculate the Cover for each of the 1,100 people in the New Zealand panel. Clearly, Cover is related to the size of the household, as shown by Figures 1 to 4, where single-person homes have Cover of around 100% whereas a person living in a four-person home has a Cover of around 30%. Notice that guest viewing is included in household viewing, so some Cover values are less than 100% in single person homes.

As explained above, Cover is clearly related to household size. We also investigated eleven other demographic variables, ranging from the age of the panellist to the number of televisions in the home, to see if they impacted on Cover.

Two statistical methods were used to find the demographics that best explained Cover. The first method, used in the UK, was AID (Automatic Interaction Detector).
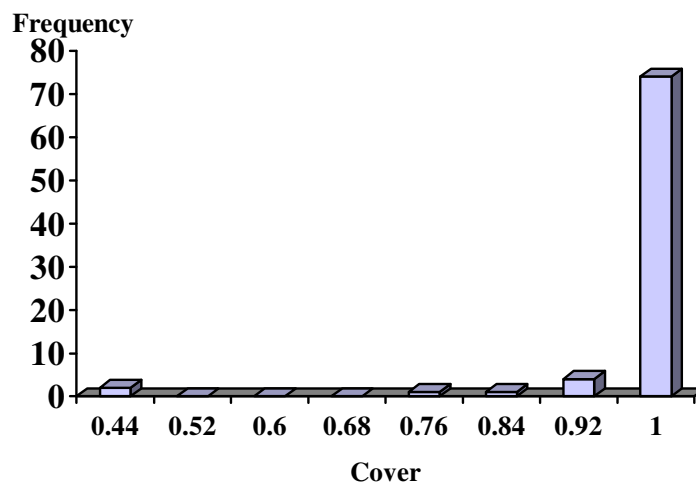
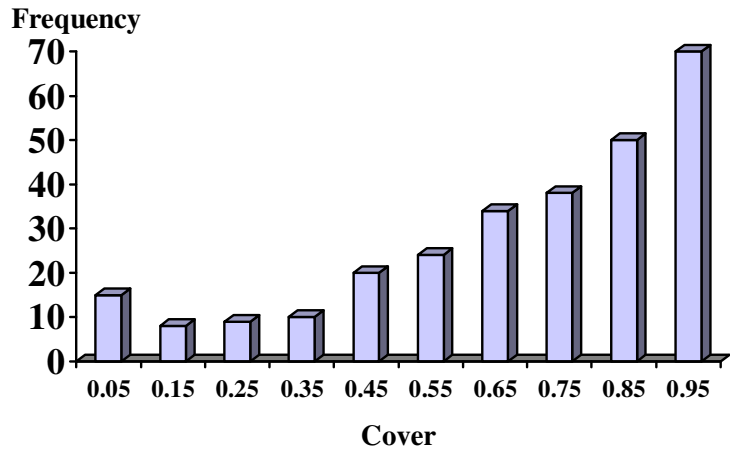**Figure 1 Cover for single-person homes**

Figure 2 Cover for two-person homes

Frequency

Cover

Figure 3 Cover for three-person homes
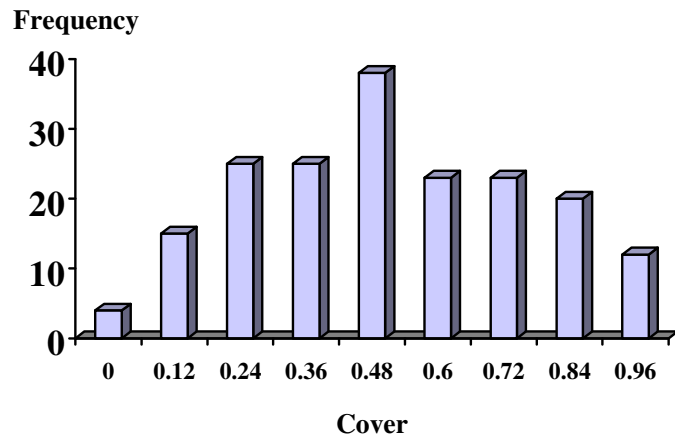
Frequency

Cover

Figure 4 Cover for four-person homes

Frequency

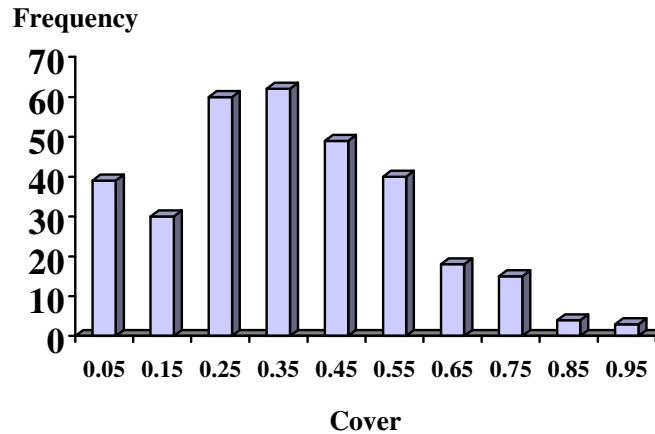**Cover**

This splits the panel into the two most disparate groups possible (in terms of Cover) using one of the twelve demographic variables. It then splits each of these again to create four most-distinct groups and continues until no further splitting is worthwhile. The second method, used in New Zealand, was multiple regression. Here the dependent variable was Cover and the independent variables were the twelve demographic variables.

Both the methods resulted in the demographic variables Household Size (1,2,3,4+), Claimed Weight of Viewing (Light, Medium, Heavy) and Main Household Shopper status (Yes, No) as being the best explainers of Cover.

The next stage was to cross-tabulate the panel by these three variables and to calculate the average Cover for each of the 4 x 3 x 2 = 24 cells. A number of these cells had similar average Cover values so some were collapsed to produce seven final groups. For example, Group One was single-person households, having a mean Cover of 97% and a standard deviation of 9%.

Finally, each panellist is classified into one of the seven groups. Any person whose Cover value is more then two standard deviations below the mean for their group is singled out for investigation by the panel manager. For example, the cutoff value for Group One is 97- (2 x 9) = 79%. (Alternatively, the cutoff value may be defined as the lowest 5%, say, of each group.) In Group One, there were three panellists living on their own whose cover values were 73%, 43% and 40% so each of these panellists was 'phoned and asked (subtly) why their viewing had been low over the past four weeks. In all three cases the person had a guest staying with them and the guest watched quite a lot of television. For multiple-person homes the reasons for low viewing ranged from 'working late and not watching much TV' to 'bought computer game and have been playing with this'. In other cases there were technical reasons for low viewing, such as one person who was pushing the wrong button on the peoplemeter remote control and another whose button did not work.

Of the 27 panellists investigated only two gave evasive answers and appeared not to be cooperating. As such a large proportion of those people who initially seemed suspicious had legitimate reasons for low viewing the investigative calls must be

delicately handled. Certainly the call must not encourage more viewing or seem to have 'big brother' connotations.

Conclusions

To combat doubts about peoplemeter panel wearout the Cover Analysis technique was devised. Its roots are in quality improvement, where panellists whose viewing drops significantly below the norm are singled out for further scrutiny. In New Zealand the Cover parameters are reset every three months to coincide with seasonal fluctuations in television viewing. Cover Analysis is now part of the on-going panel management regime, including yearly coincidental surveys and a programme of enforced rotation of panellists after three years on the panel (Danaher, Beed & O'Neill 992).

Acknowledgement

References

DANAHER P J & BEED T W (1992). Peoplemeters: do they really measure what people watch? *ADMAP*, 316, March, 42-44.
DANAHER P J, BEED T W & O'NEILL D P (1992) .Development of a rotation strategy for the NZ Peoplemeter Panel. *Proceedings of the ARF/ESOMAR Worldwide Broadcast Audience Research Symposium*, Toronto.