

## 2.11 Evidence from panels in readership

### INTRODUCTION

The complex nature of the concept of readership is greatly underestimated. If that was not the case, panel research would have played a dominant role in validating readership claims and carrying out experimental readership studies.

As early as 1961 a major study of television viewing was carried out which clearly established that the diary method is superior to any form of aided recall technique\* even when reducing the recall period to one day. Memory decay is apparently rapid and it causes important over and underestimates of real viewing behaviour. Since that time all major qualitative studies of viewing behaviour have been based on panels.

The unique qualities of panel data as a basis for policy decisions are gradually gaining ground in other sectors of industry, government and at universities.

More and more awareness grows that a broad spectrum of data collected from the same informant in continuity offers very rich possibilities for uncovering fundamental relationships in social behaviour. It is also recognised that this type of information offers an excellent basis for reliable forecasts.

There is no evidence, however, that experimental panel studies of readership have played an important role on a broader international level. It is the more astonishing that in the few panel readership studies available the readership levels from *ad hoc* studies have been taken as a yardstick for the quality of the panel measurements.

This is an outstanding example of the conflict between evidence and traditional concepts.

From a commercial point of view this is understandable, because important sums of money are at stake and it is not illogical that in most countries publishers are and will be in the forefront of press media research.

National readership studies currently make use of *ad hoc* methods. In a single interview the readership behaviour for all press media are covered and in many studies also radio listening, television viewing and the buying behaviour for a series of products are included.

The structure of these studies varies from country to country. Some are concentrated in a few weeks, others are spread over the year. All these studies, however, have

in common that *personal change in media use and buying behaviour cannot be measured*.

A second common feature in *ad hoc* studies is that the recall bias is positively correlated with the length of the recall period. There is evidence that *ad hoc* studies of buying behaviour are seriously biased. Depending on the buying frequency and other factors (eg status) reporting levels may vary from under-reporting to over-reporting with a factor of 4\*\*, while continuous recording based on panels will practically always produce acceptable reporting levels.

Memory decay in readership studies is so extensive that it has been necessary to construct artificial reading probabilities in order to match last issue readership and frequency of reading claims. (The difference in claimed last issue readership and the calculated average issue readership from the frequency claim is caused by memory decay.)

In a panel this problem does not exist because the reading behaviour is recorded weekly or daily by panel members.

The greatest advantage offered by panels, however, is the possibility of direct dynamic analysis of relationship of behavioural variables on an individual level. (A summary of the most important differences between the *ad hoc* and the panel method is given in the Appendix.)

In the following pages a short description of the panel and the questionnaire design for magazines will be given first. Subsequently it will be demonstrated how reading claims can be linked to circulation.

In the last part of this paper results of *ad hoc* studies will be compared with panel results.

### THE PANEL

The panel consists of all the individuals of 12 to 75 years of age, recruited in over 5000 homes, in total more than 10,000. The continuity of reporting is over 80% per year.

The inclusion of all qualifying family members in the sample is essential for a number of reasons. The response rate of individuals is higher. Reading/viewing can be analysed as the social event which it is. The inter-

\* Comparison survey of audience composition technique 1961. Validation norm: Coincidental survey.

\*\* eg, John Parfitt "How accurately can product purchasing be measured by recall or single interview?" Journal of Advertising Research 7 3, 1967.

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relationship between groups of individuals (eg, housewives and heads of households) is much more reliable because they are measured in a single sample.

The media covered by the panel are: monthlies, irregular publications, bi-weeklies, weeklies, dailies, television and cinema and theatre. All media are measured by means of a diary, in which also product buying and shopping behaviour are recorded.

The reading behaviour for all magazines, that is weeklies, bi-weeklies, monthlies, irregular publications, etc are recorded once per week. In order to be classified as a reader of a bi-weekly/monthly one must read at least once in two weeks/four weeks.

For viewing behaviour and reading behaviour of dailies it is necessary to have data for each day separately. These data are measured not continuously but for selected weeks only, because of the higher frequency of use.

A frequency question is not used. Frequency of reading/viewing and cumulations are directly derived from the weekly/daily recordings.

### QUESTIONNAIRE DESIGN FOR MAGAZINES

Not only is reading recorded by panel members: they are also requested to indicate how they got hold of the copy read. This classification is vital for linking readership and circulation. The readership question and readership classification for monthlies and weeklies are as follows:

Did you read or glance through one or more of the following magazines at home or somewhere else during this week?

YES  
NO (Please tick)

If YES, indicate for each title in the appropriate box how you got hold of the copy, using one of the following codes.

- 1 = did not spend money for it and did not read at home eg, hairdresser, friends.
- 2 = got or borrowed it and read at home eg, from friends, neighbours, free copy.
- 3 = a housemate bought a copy eg, at the door, in a shop, bookstall, station, etc.
- 4 = I myself bought a copy eg, at the door, in a shop, bookstall, station, etc.
- 5 = reading circle/portfolio, sharing costs with eg, friends, neighbours.
- 6 = reading circle/portfolio, paid for by myself and/or housemates.
- 7 = subscription door/mail; sharing costs with

friends, neighbours, etc.

8 = subscription door/mail paid for by myself and/or housemates.

The total number of readers can easily be established by counting all individuals who have recorded a code for a certain magazine. The breakdown per code classifies readers according to the method of obtaining a copy.

### FROM READERSHIP TO CIRCULATION

The readership classification system has been designed in such a way that apart from classifying readers it is also possible to calculate the number of copies of a magazine bought by households. In most cases this number should be a good estimate of circulation. For the sake of simplicity the term 'circulation' will be used instead of number of copies bought by households unless stated otherwise.

Reading and buying are dynamic processes of a rather complex nature.

Subscribers may read a copy of their magazine each issue period, on the other hand they may read several copies in one period for the first time (parallel readership).

People may buy one copy and read it during several issue periods, and in each period indicate that they bought a copy (replicated readership). Hobby magazines, for example, may be especially liable to replication.

Circulation may grow or decline in time. People will change subscriptions. For a certain period they subscribe to one magazine and the next period they may switch to another. Per title there may be vast structural differences in this respect. There are magazines with great loyalty and others with very poor loyalty.

In estimating circulation from readership classifications all these factors had to be taken into account as far as possible. For most of these problems solutions have been found, with the exception of the problem of replicated readership.

If in the diary *the issue number read* were recorded as well the problem would be solved, but that would greatly complicate the research design.

On an experimental basis, however, this approach would be possible. In this way correction factors could possibly be found for different types of magazines. The influence of replication, however, is probably very limited and it will therefore not disturb the estimates of circulation to a great extent.

In order to arrive at circulation the following procedures have been adopted:

#### Step one

Identical codes amongst individuals in the same home are removed and all codes are validated within homes.

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Another complication is the possible duplication between codes 3 and 4. This complication has been solved as follows: if the housewife bought a copy and others read that copy, only code 4 is used for the home. If someone else bought a copy and others read that copy, only code 3 is used for the home.

### Step two

A weighting factor is given to each code (Table 1).

In determining these factors two basic assumptions have been made:

- (a) reading portfolios last 10 weeks.
- (b) sharing costs for a magazine with another household is limited to one other household.

### Step three

Codes 7 and 8 are used only if at least one member of the household has read a subscription copy in the issue period. In case of parallel readership this need not be the case. An experimental study on this subject has recently been carried out. The reading habits of all subscribers were analysed starting from a key period.

In order to find subscribers not reading in the key period four, three and two issue periods around the last issue period were studied for weeklies and 11 to three weeks around the key period for monthlies.

If we label the key week K, the preceding period P and the later period L, the following patterns can be distinguished.

- P + K + L
  - P + K -
  - K + L
  - K
  - P and L
  - P only
  - only L
- possible reading patterns  
of subscribers

All readers in period K are subscribers.  
All readers in both P and L are parallel readers and

subscribe to the magazine in the key period.

All readers in P only and in L only are former or new subscribers not subscribing in the key period.

The small number of subscription readers in the key period only were reduced to practically nil when extending the periods around the key week.

Based on this experiment it has been established that for weeklies three weeks preceding and three weeks following the key week will produce practically all the subscriber non-readers in the key week because the change caused by moving to four weeks was negligible.

For monthlies the critical period around the key period appeared to be five weeks both ways.

In the experimental analysis it was found that the percentage of subscribers non-readers in the key period varied between 4% and 11% for weeklies and between 6% and 20% for monthlies. An idea of the sizeable problem of subscription switches could also be obtained from the experimental study.

More extensive analysis is necessary, because especially changes in subscriptions are particularly concentrated in certain periods of the year. Cautious estimates, however, indicate that total changes per year may vary between 15% and 60% of the total number of subscribers in any period. New titles in particular need a long period in order to stabilise, before a normal switch pattern is established.

All this illustrates the complex nature of what readership is. In an *ad hoc* approach it is not possible to uncover this complex structure.

The dynamics of readership is such that only continuous research stands a chance of solving these problems.

For a better understanding of the way the circulation estimate is arrived at an example of such a calculation will be given for the family weekly magazine *Panorama* (Table 2) (key week 1, w/e 24/3/1979). Duplication has been taken into account (parallel readership slightly overestimated because in this analysis all subscribers in 4 w/e 24/3 were tabulated).

TABLE 1

| Code                               | weeklies | bi-weeklies | monthlies |
|------------------------------------|----------|-------------|-----------|
| 1 Did not spend money/read at home | 0        | 0           | 0         |
| 2 Got or borrowed, read at home    | 0        | 0           | 0         |
| 3 housemate bought a copy          | 1.00     | 1.00        | 1.00      |
| 4 I myself bought a copy           | 1.00     | 1.00        | 1.00      |
| 5 shared reading circle/portfolio  | 0.05     | 0.10        | 0.20      |
| 6 Family reading circle/portfolio  | 0.10     | 0.20        | 0.40      |
| 7 shared subscription              | 0.50     | 0.50        | 0.50      |
| 8 family subscription              | 1.00     | 1.00        | 1.00      |

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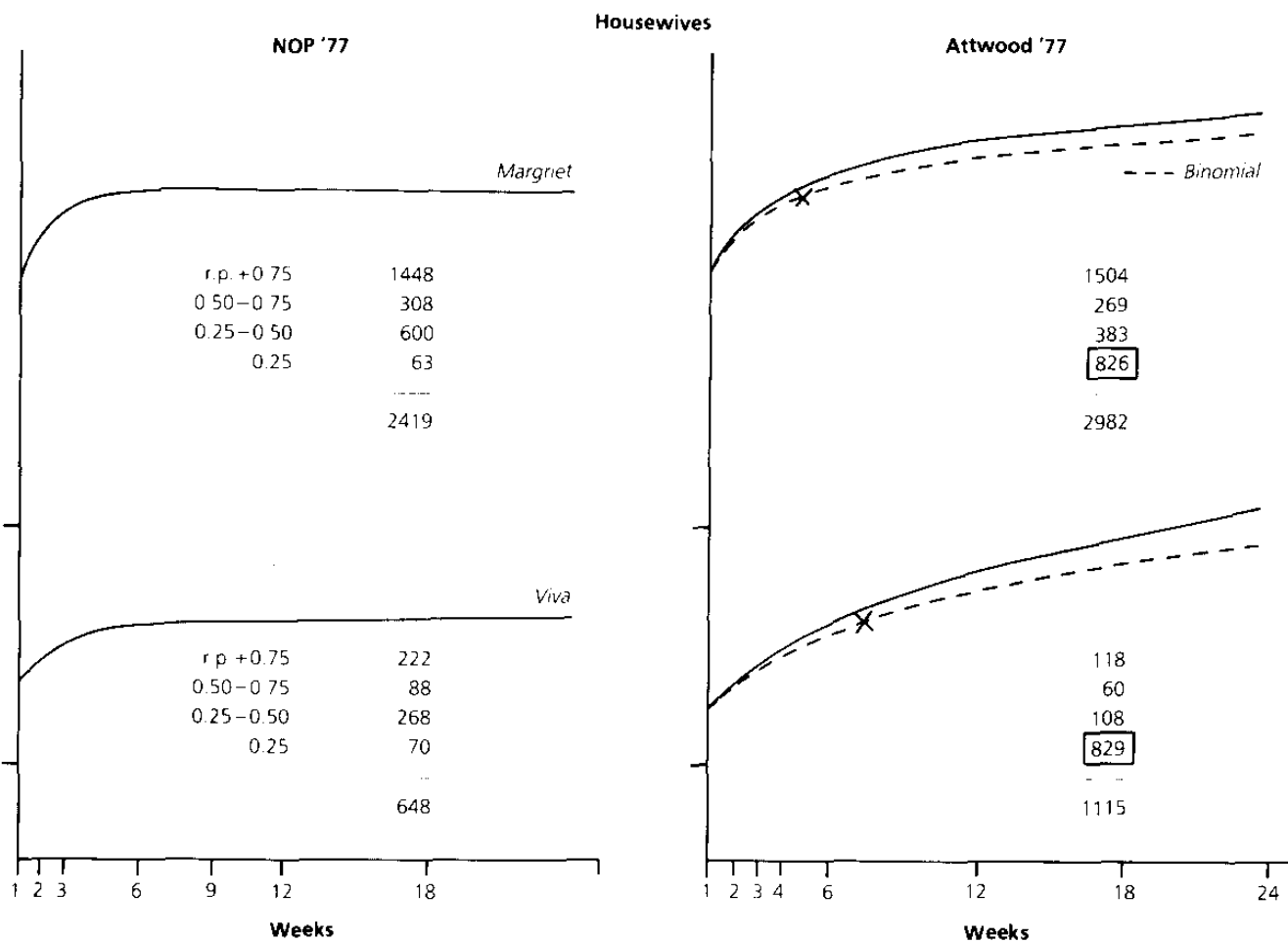
**TABLE 2**

| How obtained codes | weighting factor | average issue readership | estimate of circulation |
|--------------------|------------------|--------------------------|-------------------------|
| 1                  | 0                | 117,200                  | —                       |
| 2                  | 0                | 188,000                  | —                       |
| 3                  | 1.00             | 48,800                   | 27,300                  |
| 4                  | 1.00             | 48,500                   | 48,500                  |
| 5                  | 0.05             | 57,100                   | 2,900                   |
| 6                  | 0.10             | 537,200                  | 53,200                  |
| 7                  | 0.50             | 13,700                   | 7,000                   |
| 8                  | 1.00             | 213,500                  | 213,500                 |
|                    |                  | circulation              | 352,400                 |

**TABLE 3**

|                      | Panel coverage parallel readership |            |
|----------------------|------------------------------------|------------|
|                      | excluded %                         | included % |
| Opinion weeklies     | 75                                 | 82         |
| Radio/TV weeklies    | 95                                 | 98         |
| Family weeklies      | 85                                 | 94         |
| Women's weeklies     | 90                                 | 97         |
| Needlework monthlies | 93                                 | 103        |
| Hobby monthlies      | 75                                 | 92         |

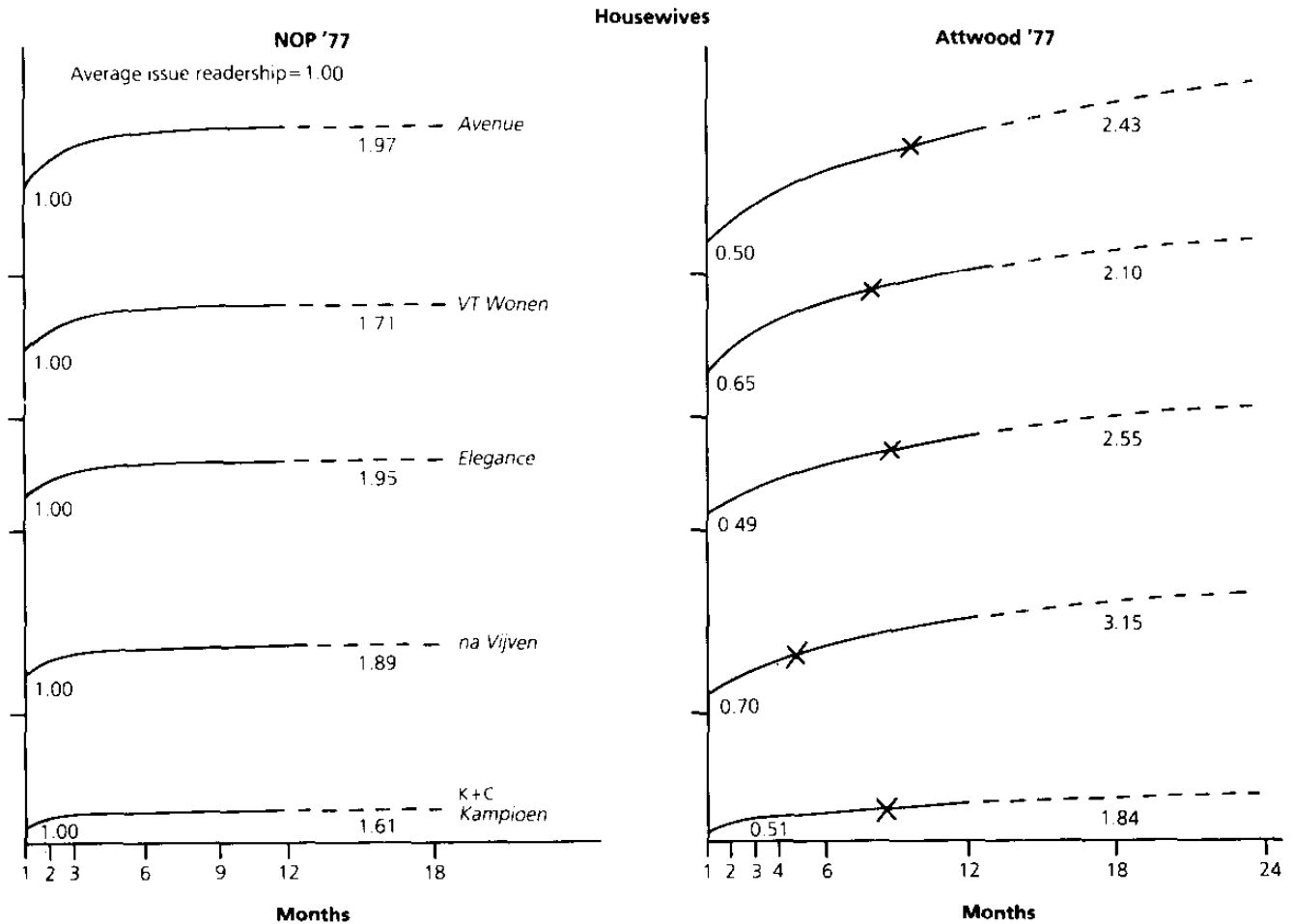
**FIGURE 1**



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FIGURE 2



Because of the overestimation of parallel readership the actual estimate may be up to 5% lower. According to the publisher actual circulation in the week concerned was 364,000 copies. Taking into account that non-households may also buy copies of the magazine this is a fairly accurate estimate. Coverage of circulation for some groups of magazines is as **Table 3**.

Opinion weeklies have a relatively low circulation of between 40,000 and 130,000. A relatively high proportion of this circulation will find its way to non-households like hotels, cafés, companies, libraries, colleges, etc.

For needlework monthlies replication may be important. Although further improvements in questionnaire design and refinements (eg replicated readership correction factors) are possible especially for

individual titles, the evidence from these results is that *circulation can be accurately measured by sophisticated and well run panels*.

It should be stressed that these results can only be achieved in individual panels integrated in household panels. Only in that case it is possible to exclude duplication and to validate per household.

### READERSHIP BASED ON PANELS

In his book *Reliability of response in readership research* Wally Langschmidt stated that he believed that "until such time as reading claims can be linked more directly with circulation, readership surveys will remain suspect in the minds of many media men".

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As the link between readership and circulation demonstrated in the former paragraph is pretty good, by inference it may be assumed that readership levels derived from the individuals panels must be good estimates of true readership.

With some examples the main differences between *ad hoc* and panel measurements can be demonstrated.

In **Figure 1**, for two women's weeklies a comparison is made between NOP (the national readership survey) and Attwood (panel based readership data). *Margriet* is heavily bought on subscription (about 80%) and for *Viva* single copy sales are predominant ( $\pm 70\%$ ). In NOP total issue readership is virtually reached after six weeks for *Margriet* as well as for *Viva*.

In the panel after 18 weeks the readership level is still increasing, although for *Viva* much more strongly than for *Margriet* which seems very logical.

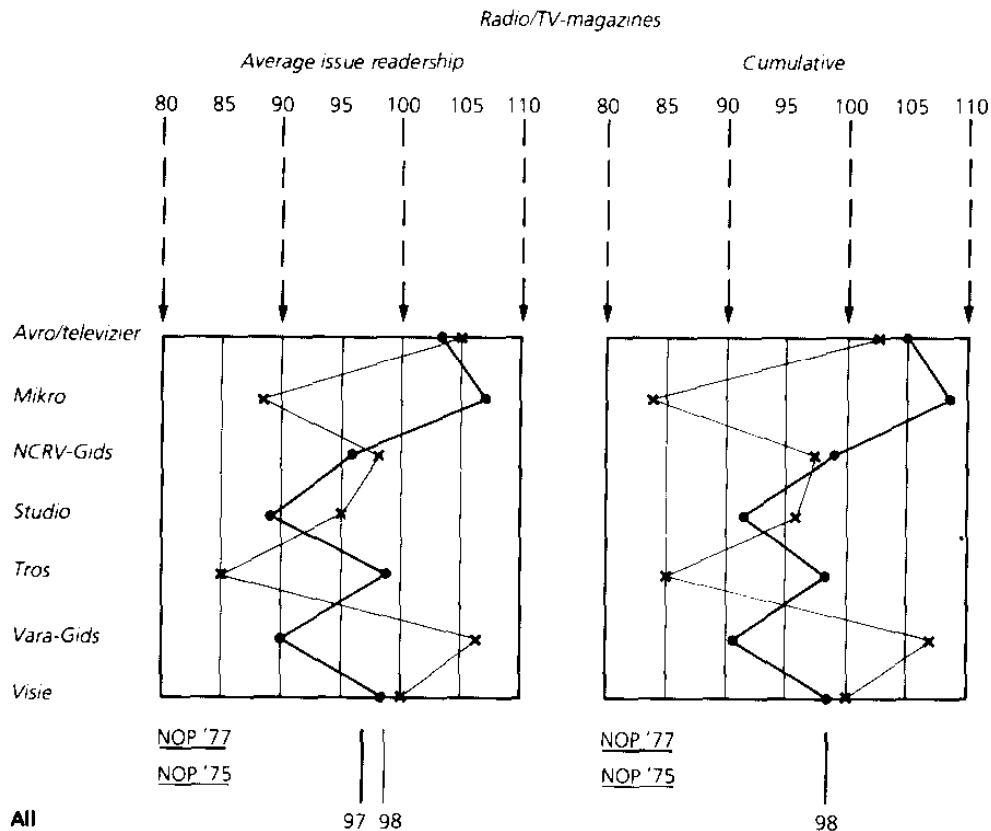
Readership levels for regular readers of *Margriet* (readership probabilities  $\geq 0.50$ ) for *ad hoc* and panel measurements are close, but readership levels for incidental readers ( $> 0.50$ ) are totally different.

For *Viva* the differences are more dramatic. The readership level after 18 weeks in the panel is almost twice as big as in *ad hoc*. Memory decay apparently plays an important role, while at the same time there seems also to be considerable exaggeration of regularity of reading by irregular readers in case of *ad hoc*.

In the panel the total readership levels of NOP are reached after five weeks for *Margriet* and for *Viva* after eight weeks.

The cumulative figures of the panel are factual, while in NOP cumulative figures are arrived at by making use of evaluation based on the binomial distribution. As can be seen from the graphs, this binomial evaluation

**FIGURE 3**  
Reading index heads of household/housewives





## APPENDIX

### Comparison between the *ad hoc* and the panel approach

#### DATA COLLECTION

##### **Ad hoc**

- (1) largely dependent on memory causing important bias. Reference period difficult to define. Bias increases with length of issue period.
  - (2) sensitive to status of the magazine.
  - (3) different circumstances for each respondent, caused by:
    - (a) day and time of interview.
    - (b) interview situation.
    - (c) interviewer bias.
  - (4) recording of movements during the year is not really possible.
    - (a) seasonal variations only globally for large circulation media.
    - (b) structural increase or decrease in readership cannot be measured.
    - (c) new titles cannot be included in the measurements.
- A typical static approach.
- (5) measurements of television viewing only possible in very broad terms, not per channel for a sufficient time period.
  - (6) linking readership and circulation not possible.
  - (7) integrated page traffic studies not possible.
  - (8) product buying/usage can be measured at an acceptable level. Quantity bought data are not very accurate.
  - (9) no collection of additional information.
  - (10) no possibility of recording the effects of unexpected events.

##### **Panel**

- (1) hardly dependent on memory. Reference period easy to define because of perfect linking of short periods of time (week or day).
- (2) not sensitive to status.
- (3) similar circumstances for each respondent. The same respondent records for each day of the week and each week in the year at a time which suits him/her without being influenced by an interviewer.
- (4) complete flexibility in reporting, because each week all panel members record their reading behaviour. New titles can not only be measured right from the start, but also analysed against competing media. A typical dynamic approach.
- (5) accurate measurement of television viewing per channel, per day and per period.
- (6) linking readership and circulation possible.
- (7) integrated page-traffic studies possible.
- (8) product buying/usage and quantity bought data can be measured continuously and reliably.
- (9) subsequent collection of information simple.
- (10) the consequences of unexpected events (eg an exceptional winter or the introduction of a 'no-driving' Sunday) on reading behaviour, etc can be recorded instantly.

#### TOPICALITY OF THE DATA

##### **Ad hoc**

- (1) the fieldwork for building up the full sample takes a year.
- (2) publication of the data collected requires at least six months.
- (3) the data obtained are at least six months old, and this may increase to up to 2½ years.

##### **Panel**

- (1) weekly recording of the total sample.
- (2) publication in table form requires eight to ten weeks.
- (3) the age of the data obtained may vary between a minimum of eight weeks and a maximum of 34 weeks.

#### PROCESSING OF THE DATA

##### **Ad hoc**

- (1) many types of artificial procedures are necessary in order to match last issue readership and average issue readership derived from the frequency distribution.
- (2) processing complicated.
- (3) data entry and processing limited by high costs of the data preparation.

##### **Panel**

- (1) actual reading probability can be exactly calculated for each single individual.
- (2) processing simple.
- (3) data entry and processing weekly, which makes weekly processing possible at low cost.