

THE MODEL BIAS: PARALLEL AND REPLICATED READING

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For more than fifty years readership research has been based on a very simple model - developed in the late thirties in the United Kingdom and accepted until now in all English speaking countries, that is: where all people speak English as their mother tongue or where media researchers use it as their second language.

The idea of this model can be expressed as an equation:

*The readership of an average issue
is equal to
the readership in one issue period*

The clearest solution to demonstrate this correspondence was designed by Wally Langschmidt in his dark blue booklet, dated March 1978.

Reliability of response in readership research (page 96)

29. Recency of the last reading event

The Recency method of audience measurement is one of the most popular research methods and has been used since the mid-1930's in Britain. It is also used in Europe, the USA (TGI) and Canada. The logic on which the method is based can clearly be traced from Table 32. It can be seen that if a specific issue of a publication gains a diminishing number of new readers during the course of its 'life' then its total audience cannot be measured until that specific issue has in fact completed its 'life'.

If however the publication's 'life' is divided into time periods equal to the publishing interval then it can be seen that, on average, the audience gained by an issue (that is 'horizontally' in the table) is in fact the same as the total readership of different issues during a single issue period. (That is 'vertically' in the table.)

HOW THE RECENCY METHOD WORKS

Table 32

ISSUE NO.	THE PAST IN ISSUE PERIODS										THE FUTURE					ISSUE TOTALS
	9	8	7	6	5	4	3	2	1	NOW	1	2	3	4		
Issue 1	15	8	5	3	2	1										34
Issue 2		15	8	5	3	2	1									34
Issue 3			15	8	5	3	2	1								34
Issue 4				15	8	5	3	2	1							34
Issue 5					15	8	5	3	2	1						34
Issue 6						15	8	5	3	2	1					33
Issue 7							15	8	5	3	2	1				31
Issue 8								15	8	5	3	2	1			28
Issue 9									15	8	5	3	2	1		23
Issue 10										15	8	5	3	2	1	15
ISSUE PERIOD TOTALS						34	34	34	34	34	34	34	34	34	34	

NOTE: The * shows that these issues have not yet completed their "lives".

In general we can say:

The readership of a given issue in any period of time (= entire 'life' of an issue) is equal to the readership of any issue in a given period of time (= one issue period).

Also in the late seventies I gave a shorter description of the same phenomenon - without any knowledge of the work of Wally Landschmidt.

Ausgaben Issues

		Ausgaben Issues				
		1	2	3	4	
W O C H E N	w e c k s	1	60			60
	2	25	60			85
	3	10	25	60		95
	4	5	10	25	60	100
		100	95	85	60	

There is no doubt that this equation is correct:

*The readership in one issue period
is equal to
the readership of an average issue.*

But there are two kinds of reading behaviour which disturb the coherence, the connection of these two fundamental readership definitions: **Parallel reading and replicated reading.**

- **Parallel reading** - Copies of more than one issue read in only one issue period.

We ask about the reading of a copy of at least one issue in the publication interval 1. The contacts with copies of earlier issued in the interval concerned are not counted. Compared with the real figures we obtain too few readers. The readership of an average issue is estimated too low.

- **Replicated reading** - A copy of an issue read in more than one publication interval.

We ask about the reading of a copy of an issue only in one issue period. The contacts by replicated reading of a copy of the same issue in more than one publication interval must be subtracted. If we do not: we get too many readers compared with the real figures. The readership of an average issue is estimated too high.

Although this model bias has been known for more than thirty years we only find solutions for this problem on two occasions:

First in the early sixties the discussion arose in the UK, stimulated by The Roy Thomson medals and awards for Media Research, 1962, second in the early nineties when the Arbeitsgemeinschaft Media-Analyse in Germany tried a large number of approaches to find appropriate tools for validating readership figures.

In this paper I will present three practical solutions proposed by very different authors.

¹ Issue period and publication interval are used synonymously in this paper.

A. Corlett, Pretty, Rotham, Great Britain
The Roy Thomson Medal and Award Winning Paper 1962.

The modified recent reading technique

With this technique one would continue the traditional practice of asking about *recent* reading - that is whether or not any copy of the periodical had been looked at *within a given period back from the day of interview*, such as four weeks - but, by asking additional questions, one would modify the traditional estimator and would attempt:

- (a) to remove the effect of 'replicated readership' by discounting the reading thus reported unless the *first* reading of that issue had occurred within the memory period; and
- (b) to take the 'parallel readership' into account by ascertaining also how many *other* issues of the periodical in question had been looked at, *for the first time*, in the period.

In other words, one would attempt to establish how many first readings of separate issues of the periodical had occurred within the memory period.

These alternative approaches will now be considered in more detail.

As we have seen (page 12 above), the information which the 'modified recent reading technique' seeks to obtain at the interview for each monthly magazine covered is:

How many separate issues has the informant looked at for the first time in the past month?

By 'in the past month' is meant in the period beginning on the same date last month as the day of the interview and ending with the day before the interview.

It seems fairly clear that a single 'omnibus' question of this type would not be practical; some such form as the following might be used:

(a) Have you ever looked at a copy of(title) during the past month?

If yes:

(b) Now I want you to think of the last time that you looked at a copy of(title). Was that the only *time you looked at that particular issue or had you looked at it before?*

If 'before'

(c) When was the first time you looked at that particular issue?

(d) Did you happen to look at any other issue of(title) during the last month?

If 'yes'

(e) How many of these other issues of did you look at for the first time during the last month?

It would, of course, be quite essential to incorporate in the early stages of the interview, and at appropriate points throughout it, explanations and reminders of the meaning of terms such as 'at' and 'in the past month', and of the fact that *any* copy (not necessarily the current one), *anybody's* copy (not necessarily the informant's own) and looking at it *anywhere* (including outside the home) should be included in the answer; but a detailed treatment of these matters is outside the scope of this paper.

Advantages and disadvantages of the 'modified recent reading technique'

Its chief disadvantage is that by requiring further questions additional to those of the traditional technique, it adds to the difficulties of that technique (which have been so clearly illustrated by Dr Belson's work) without contributing anything to their solution. (As we have seen, the 'life-old-issue' technique should help to *solve* many of the difficulties of the traditional technique; the 'modified recent reading technique' adds to them.)

Dr Belson's work illustrated in particular the difficulties of obtaining reliable information in answer to the question whether or not the informant had looked at a copy of a monthly magazine in the past four weeks. In view of this it seems to us *prima facie* rather unlikely that the additional questions which the modified techniques requires to ask about this period (e.g. the number of *other* issues looked at *for the first time* in the past month) could in fact be reliably answered. For this reason we have considered the possibility of a further modification to the technique which should improve its chance of success - the use of a *week* (i.e. 'the past seven days') rather than a month as the memory-period.

(It is not necessary or useful to report the variation of the main idea of the modified recent reading technique of Corlett and others.)

The essentials of the English approach of 1962 are :

Questions:

- 1 Did you read any copy of any issue of a particular publication in the past issue period?
- | | |
|-----|----|
| YES | NO |
|-----|----|
- 2 Did you read a copy of only one issue or copies of more issues of this particular publication in the last issue period?
- | | | | | | | | | | |
|---|---|-------------|-----|------------|--|------------|-------------|---------------------------------------|---------------------------|
| If only one issue | If more than one issue | | | | | | | | |
| Did you read this copy for the first time within the issue period or also before this? | Which or how many of these copies did you read for the first time within the issue period and which or how many of them also before this? | | | | | | | | |
| <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; text-align: center;">first time</td> <td style="width: 50%; text-align: center;">also before</td> </tr> <tr> <td style="width: 50%; text-align: center;">AIR</td> <td style="width: 50%; text-align: center;">replicated</td> </tr> </table> | first time | also before | AIR | replicated | <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; text-align: center;">first time</td> <td style="width: 50%; text-align: center;">also before</td> </tr> <tr> <td style="width: 50%; text-align: center;">1 2 3 4 5 +
AIR
and
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AIR
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parallel | 1 2 3 4 5 +
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| AIR | replicated | | | | | | | | |
| first time | also before | | | | | | | | |
| 1 2 3 4 5 +
AIR
and
parallel | 1 2 3 4 5 +
replicated | | | | | | | | |

The winners of the 1962 gold medal presented a proposal for solving the problem, but no results of experimental work.

B Dr Elisabeth Noell-Neumann, Germany
Second placed paper of
The Roy Thomson Medal and Award 1962, pages 27 - 32
Published in Germany in:
Institut für Demoskopie Allensbach
Werbeträger-Analyse 1963, S. 151-172
Stichwort: Gehäuftes and gedehntes Zeitschriftenlesen

My source for this paper is the German version and I will present translations of her German text. (It is possible that you will find small differences between her English text '63 and my English text '93).

All solutions published by The Roy Thomson Jury took the form of proposals - I have never seen or heard about the announced survey "commissioned by the IPA and based on our own recommendations" (Corlett and others, page 20).

Elisabeth Noelle-Neumann introduced her proposed technique into the Werbeträger-Analyse 1963 (fieldwork 62/63), the independently financed Media-Analysis of the IfD Allensbach, and has shown results.

But now to the wording of the questionnaire.

1. Could you tell me whether you have read or leafed through one or more of these magazines in the last four weeks? Only in the last four weeks please!

Would you be so kind as to make two piles out of these (masthead cards). On one pile you put cards with magazines, which you have read in the last four weeks, on the other pile all the remaining magazines.

If one or more: next question.

For the one or for the first of several magazines:

2. I would like to ask you more about this magazine: Have you read only one book or several different books of this magazine ... in the last four weeks?

If only one book:

3. Could you tell me, when was the last time you read something in this book of the magazine? When was the last time you opened this book? Perhaps you could show me the date?

Respondent indicates day and month of the last contact with the magazine on the calendar.

4. Did you read this book of the magazine one time only? I mean, did you pick it up only once or did you read it more often?

Only once

More often

5. And do you remember when you started with this book? I do not mean the time you started reading this magazine in general, but only, when did you start reading this book?

Note: "Book" is the translation of the German 'Heft'. In questions 3, 4 and 5, it is also possible to say 'number' or 'copy'. But what is meant exactly is: a copy of one particular issue of a specific publication.

This is not very clear especially in question 2: - *Have you read only one book or several different books of this magazine...?* Does that mean a copy of only one issue or copies of several different issues?

If the respondent read copies of more than one issue: The same procedure followed for questions 3, 4 and 5 for all issues stated in question 2.

- Q3 When last read? (with calendar)
- Q4 How often picked up?
- Q5 When start to read? (with calendar)

The dates found with the help of the calendar in connection with the date of the interview allow average issue, replicated and parallel readers to be determined as follows:

- 1 Read within the publication interval
 - 1.1 And a copy of only one issue and
 - 1.1.1 Started in the publication interval (Q 5) = average issue reader = yes AIR
 - 1.1.2 Started before the beginning of the publication interval (Q 5) = replicated reader = no AIR.
- 1 Read within the publication interval
 - 1.2 And copies of several different issues and for each of the different issues
 - 1.2.1 Started in the publication interval (Q 5) = parallel reader = to be added to the AIR
 - 1.2.2 Started before the beginning of the publication interval (Q 5) = parallel and also replicated readers = no AIR.
- 2 Read before the publication interval = started and finished with a copy of a particular issue (Q 3 and Q 5).
- 3 Picked up how often? (Here only necessary and useful for reconstructing reading behaviour.)

For the results see page 146

C. Dr Siegfried Geiger, Koln, and Infratest Burke, Munchen Arbeitsgemeinschaft Media-Analyse "Heftherkunfts-Studie" Frankfurt/Main 1990

The wording of the questions.

If the respondent has given an affirmative answer = is a reader of a particular publication in that last issue period, these questions will follow for the magazine concerned:

- 1. How many different books of this magazine did you read or leaf through in the last issue period?
- 2. In the last issue period did you read or leaf through the book that had just been published (the latest one) or the previous book or somewhat older books?

If read "the previous book" or "somewhat older books":

- 3. When did you start reading the previous book or the somewhat older books: In the last issue period, or did you start already reading the same book before?

If several older books read in the last issue period: ask for the 'youngest' book!

Note 1: Instead of the wording 'in the last issue period' used here, the original questionnaire stated the periods for magazines published weekly, fortnightly and monthly.

Note 2: In the translation of these questions the English 'book' is used again for the German 'Heft'. As above (see here page 143) this is to mean 'a copy of one particular issue of a specific publication.'

Geiger and Infratest introduced a new version to make the answers to these difficult questions easier:

- 'Have you read a copy of the issue just published?

With a high probability a reader of 'latest' issue will be a 'first'-reader. Replicated reading of the latest issue is not to be expected. All these readers belong to the average issue readership AIR.

- If the book read was a copy of the issue before the latest or copies of somewhat older issues the following was asked:

'When did you start reading?'

If the start was within the last issue period:

It was a 'first'-reader of older issues = yes AIR.

If the start was before the last issue it was a replicated reader = not AIR.

These questions and answers are completely sufficient for separating the replicated readers from the 'first'-readers in the last issue period.

But now to the parallel readers.

In this case we need information from all three questions:

- Question 1

How many different issues of this magazine did you read a copy of in the last issue period?

If copies of more than one issue:

- Question 2

Was it a copy of the issue just published, or the issue published before the latest one?

Were they copies of older issues?

If not the issue just published:

- Question 3

For the copy of the issue just published before the latest:

and

for the copy of the most recent of the older issues:

"When did you start reading..... In the last issue period, or already before?"

If: Started in the last issue period: 'first'-reader of copies of older issues:

They are parallel readers = to be added to the AIR.

If: Before the last issue period: replicated readers of more issues = not AIR.

(For results see below)

The progress in Germany from '62 to '90 can be seen in two aspects:

1. In '90 a calendar was not used any more. Since LA '69 at the latest we know in Germany, that a calendar intimidates respondents more than it can help them: and by giving up of the calendar the questions about the exact dates of starting and finishing reading - whether a longer or shorter time ago - were not needed either. The memory of the respondent is now focused on the last issue period and on the decision: read within or before this period.

2. The question about the age of the issue is relatively easy to answer:

-the latest

-the previous issue

-older issues

and questions to a lot of respondents to find out their replicated reading are not needed. The readers of the last issue published are the most frequent: two thirds of the AIR. And they are the 'first'-readers: Replicated and parallel reading can arise only with older issues. And only in these cases does one need to know whether or not a copy has been read for the first time in the issue period.

The results.

Germany 62/63

Included in the survey were 41 magazines (8 monthlies, 5 fortnightlies, 28 weeklies).

Sum of answers of all readers in the last publication interval		100%	
Number of issues of which a copy was read for the first time in the last publication interval	1	70%	
	2	9%	+9 *
	3	2%	+2 +2 *
Copies read in the last issue period were of issues read for the first time before the last publication interval		19%	**
		<hr/> 100%	
* to be included in the AIR (contacts)		70	
		9	
		9	
		2	
		2	
		2	
		<hr/> 94	
** to be kept out of AIR		19	

In other words: there are more replicating readers (19%) than parallel readers (11%). But if we count the contact we find more contacts with different issues read in parallel in the last publication interval (24) than contacts with issues read also before this (19).

Germany 91/92

Included in the survey were 102 magazines (50 monthlies, 13 fortnightlies, 39 weeklies).

Sum of answers of all readers in the last publication interval		100%
Number of issues of which a copy was read (first or also before)	1	80%
	2	13%
	3 or more	7%
		<hr/> 100%
Read issue just published		77%
Read an older issue		35%
		<hr/> 112%
(more than one answer possible)		
If read an older issue:		
Started reading in the last interval		12%
Also read before		23%
		<hr/> 35%

From the results of these three questions the following can be derived:

	%	%
o contact with only one issue:		80
- if this single issue was the issue just published, replicated and/or parallel reading are impossible	65	
- If this single issue was an older one, parallel reading is impossible: you cannot read one single issue in parallel, but replicated reading is possible.	15	
o Contact with more than one issue:		
With two, three or more issues, replicated reading as well as parallel reading is possible		20
	<hr/> 80	<hr/> 100

Next step: Replicated and Parallel reading in detail

Readers with first contacts to one or two issues within the last publication interval		
	readers	contacts
o contacts with one issue "within"	(74)	
- the latest read for the first time,	65 x 1 =	65
OR, an older issue read first time "within"	9 x 1 =	9
o contacts with two issues "within", of which	(12)	
- one was the latest read for the first time	12 x 1 =	12
- and the second of this dozen was an older issue but read for the first time "within" **	3 x 1 =	3
OR, an older issue, reading started "before" ** (counted below on following page)	(9)	
- both were older and started reading "before" the last publication interval *** (also counted on next page)	(1)	
	<hr/> 89	<hr/> 89

* Parallel reading of two different issues
 ** One of the two is a replicated contact
 *** Parallel reading of two replicated issues

Readers with second contacts to one, two or three, all somewhat older, and first read before the last publication interval

	readers	contacts
o first read "before" a copy of an older issue	6 x 1 =	6
o two issues, one of these was the latest or an older one first time read "within" (see above, page?)	9 x 1 =	9
or		
o both were older and reading started "before" the last publication interval (see above, page?)	1 x 2 =	2
o three issues, all older ones and reading started "before" (see above, page?)	7 x 3 =	21
	<hr/> 23	<hr/> 38
	89	
	<hr/> 112	

Conclusion

Parallel reading was practised by three out of a hundred readers in the last publication interval and that means three contacts too few were counted in our AIR model.

Replicated reading occurs more often: 23 readers started reading their older issues before the last publication interval. But according to our model we are not allowed to multiply the number of readers by the number of issues read: we ask only for at least one contact with a magazine to get the average issue readership.

But the error of 20% (23% too much minus 3% too little) by replicated reading is important enough.

On the other hand: The expense of introducing at least three more questions to our questionnaire for each publication is too much. And all publishers are happy that our model leads to an increase and not a decrease in readers.