

5.4 Effects of differing methods on the level of magazine readership figures

INTRODUCTION

This contribution represents a follow-up to the presentation made at the New Orleans Symposium. (1) It provides additional new material from investigations about spurious factors and influences which modifications of pre-choice question models may have upon coverage figures.

It would be misleading to construe this as an all-out attack upon the methods hitherto applied. Rather, it is intended to create sensitivity to the varying significance of different approaches and to emphasize the necessity of making an additional effort to seek 'true' values by means of complicated methods which will admittedly be costly initially but which will later permit us to test models that are easier to handle. The subjects dealt with are:

Recency

- (1) The influence of the proportion between the number of categories for readers and non-readers, a supplement to the findings of 1981
- (2) The influence such different proportions have on the values for reading on 'yesterday's reading'
- (3) The influence of the number of investigated magazines in a readership investigation
- (4) The effect of changes in the masthead

TTB

- (1) False Claiming? Readers in areas in which the magazine is not distributed

RECENCY

The influence of the proportion between the number of categories for sorting in readers and non-readers (masthead-cards).

This item clearly ranks first when we try to quantify the possible factors of influence on coverage figures which we have investigated up to the present (Table 1).

In 1981 we had ascertained that a change in the proportion of sorting strips by $p+.10$ establishing qualifying and non-qualifying readers leads to an increase of coverage figures by an average of 25 to 30 percent, relatively speaking. In the meantime, we have more information on this from German readership

research that confirms this tendency (Figure 1).

If these investigations are included, an increase in coverage figures by 20 to 25 percent is to be expected for an increased number of $p+.10$ categories for r_{pi} .

In the specific case of a magazine for which a coverage of 15 percent is measured with a $p=.13$ (eg. with one qualifying and seven non-qualifying categories) this implies that it can expect higher coverage figures as follows when there is a correspondingly more favourable ratio for the qualifying categories, as in the following hypothetical example:

Proportion of qualifying to non-qualifying categories	Probability for qualifying categories P	r_{pi} *
1:7	.13	15.0%
1:3	.25	18.6%
1:2/2:4	.33	21.0%
2:3	.40	23.1%
1:1	.50	26.1%

It is regrettable that more than just a single variable was changed in the experiments of the Arbeitsgemeinschaft Media-Analyse (AG.MA — Working Group for Media Analysis), that is, the relationship between the qualifying and non-qualifying categories, vis-a-vis the AG.MA standard model, a change which would have represented an experiment in the classical sense. For example, the general filter was opened wider, 1:1 categories in comparison to the proportion of 1:2 categories used otherwise.

From these and a few other modifications we cannot derive any substantial limitations for a comparison of the effects of different numbers of categories. The AG.MA experiment conducted in 1982 using the original general filter of 1:2 and a $p.25$ with a final 2:6 categories shows the expected increase in coverage figures in comparison to the standard model.

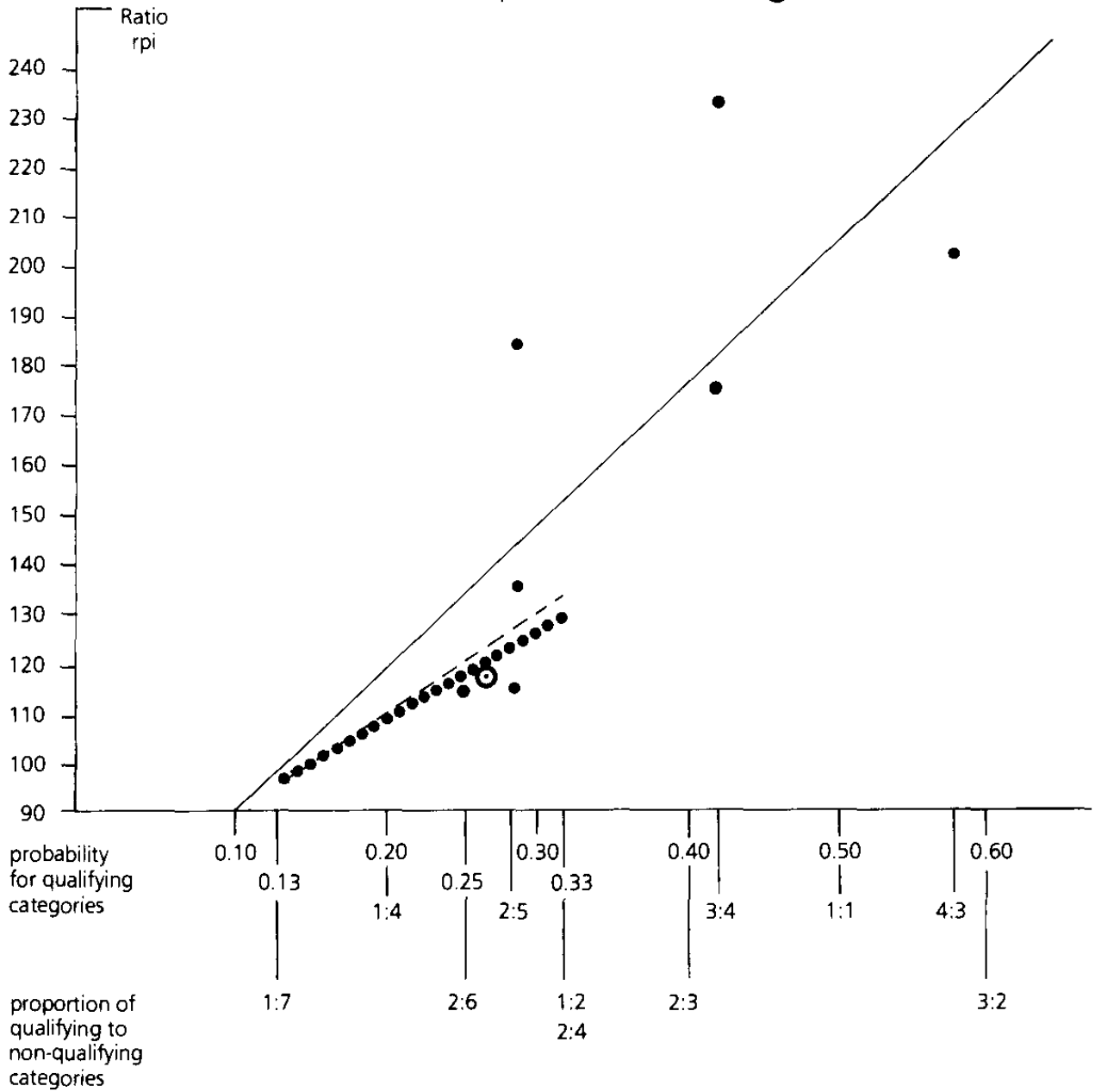
The experiment of the Arbeitsgemeinschaft Media-Analyse also confirms the more marked susceptibility or sensitiveness, of monthly and bi-weekly publications and the extraordinarily high stability of radio and TV magazines in comparison to pre-choice question models, which has been ascertained over and over again

*Based on the assumption of a 'bottom-line' of growth at $p = +.10 =$ a coverage increase of 20 percent

FIGURE 1
The strong effect

The proportion between response alternatives leading to readers per issue (rpi) and response alternatives not leading to readers per issue has a strong effect

Source: Allensbach Archives No. 2086 10/72 ● —
 Additional experiments: AWA '77/MA '77 - - - -
 AG.MA experiments '80/'81/'82 ●●●●○



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and which was also documented in connection with the Allensbach experiments of 1972 (2) (Table 2).

TABLE 1
Effects of differing methods on the size of the average readership (readers per issue) — measured with the Recency Technique

	<i>Index Sum of readerships (min = 100)</i>
<i>Question technique</i>	
Questions with differing categories for readers and non-readers per issue (1:7 and 1:1 respectively)	~ 200
<i>Number of publications</i>	
In 1981/82 some 100 publications less, (for example: 20 instead of 120)	
- monthly	159
- bi-weekly	171
- weekly	123
<i>Replicated and parallel readership</i>	
AWA '63	130**
<i>Rotation (publication intervals)</i>	
LA '63 - monthly	141
- bi-weekly	125
- weekly	104
<i>Fieldwork</i>	
Media Analysis '76	
Four field organizations*	
18 titles: all of them differing at a 5% level of significance	122
<i>Sampling method</i>	
Quota-random experiments	
13 titles: 2 differing at a 5% level of significance	105
Replication:	
13 titles: 4 differing at a 5% level of significance	111
<i>Recall aid</i>	
Design of the masthead cards: black and white or multi-coloured masthead cards	
15 titles: none of them differing at a 5% level of significance	101
* Comparison of minimum and maximum.	
**Factors for rpi figures 0.82 – 1.07 weighting.	

Is information about 'yesterday's' reading more stable and less sensitive vis-a-vis different proportions of categories?

We require very different recall performances from the respondents in the standard investigations used hitherto which are based on the recency method favoured in Europe.

Memory periods	
for weeklies	7 days
for bi-weeklies	14 days
for monthlies	1 month

In connection with trying to ascertain the coverage figures for all publication intervals for a comparable period of time that is as brief as possible, we have tested to what extent information on 'yesterday's' reading or noting is less manipulatable and more stable than information on reading in the publication interval; we have also tested whether it is influenced by pre-choice question models using qualifying and non-qualifying readers (Table 3).

In line with what we know from the investigations we have conducted into the stability of the rpi (cf. Figure 1), we expected to find an index value of approximately 140 for model A where there was an increase of the probability for the qualifying categories from p.14 to p.33 (by 0.19 points). However, we only attained 125 index points, that is to say, the influence on the values for 'yesterday's' reading is lower.

In order to put our statement on a somewhat broader basis and to double-check it, we have tried to have this approach replicated. The Austrian IMAS Institute was kind enough to help us to do this (Table 4).

An index value of approximately 115 was to be expected for model A in this Austrian investigation. Instead, an index value of 105 was measured in Austria. We can see from the two experiments that the information about 'yesterday's' reading is, in fact, more stable and less susceptible to pre-choice question models using qualifying and non-qualifying categories than appears to be true for the ascertainment of readers in the publication interval (rpi). But we cannot disregard the fact that the values for 'yesterday's' reading or noting are generally also susceptible to the same kind of bias. It remains questionable, therefore, whether the advantage of a somewhat reduced susceptibility to the well-known disadvantages, in particular to a large multiplier for monthly publications, is sufficient, if, for instance, the rpi were to be abandoned in favour of a value which shows the number of exposures to an advertising medium in the publication interval (ascertained by means of daily exposures multiplied by the number of days in the publication interval).

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TABLE 2
The use of different pre-choice question models in readership measurement (rpi) has a stronger influence on illustrated news magazines than on radio and television magazines

Question technique: Pre-choice questions with a different number of categories for rpi and non-rpi:

	1:6 categories as compared to 2:5 categories
	Index
	Gross sum of exposures
	1:6 categories = 100
4 illustrated news magazines	130
6 radio and television magazines	116

Source: Allensbach Archives No.2086, October 1972

Replication 1979/80	2:5 categories as compared to 1:2 categories
	Index
	Gross sum of exposures
	2:5 categories = 100
4 illustrated news magazines	135
4 radio and television magazines	95

Source: AWA '78 and AWA '79

AG.MA experiment '80/'81	Standard model: 1:7 categories as compared to 2:4 categories (H version)
	Index
	Gross sum of exposures
	1:7 categories = 100
4 illustrated news magazines	140
6 radio and television magazines	109
Total	
weeklies	128
bi-weeklies	154
monthlies	140

Source: H. – E. Scheler, ZV + ZV, 42/82

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TABLE 3
Does the relationship between qualifying and non-qualifying categories affect the values for 'yesterday's' reading?

Half-split experiment
 Card shuffling (20 publications)
 General filter: read or leafed through in the last 12 months

	YES	NO (skipped out)
Recency When did you last read or leaf through?	<p>Model A</p> <div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;">1. Yesterday</div> <div style="border: 1px solid black; padding: 5px;">2. Day before yesterday</div>	<p>Model B</p> <div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;">1. Yesterday</div> <div style="border: 1px solid black; padding: 5px;">2. Within the last seven days 3. 8 to 14 days ago 4. 15 to 30 days ago 5. Within the last three months 6. Longer ago</div>
Proportion between qualifying and non-qualifying period	1:2	1:6
Probability for the qualifying category	p.33	p.14
Index 'yesterday' Gross sum of exposures (1:6 categories = 100)	125	100
	n = 830	n = 821

Source: Allensbach Archives, No.4003, December 1981.

The influence of the number of publications included in an investigation upon coverage figures

In the literature about possible factors of influence we have not found data on the effect the inclusion of fairly many publications or relatively few in one investigation has on the coverage figures for individual magazines, or whether it has any influence at all. Unfortunately, our efforts to acquire internationally comparative data on this have not been successful. According to our Allensbach investigation, the influence should not be underestimated. While it is not of the order of

magnitude that is registered when a different ratio of qualifying and non-qualifying categories is used, a reduction of coverage figures of some 10 percent for 40 to 50 additional publications (or some 20 percent for 100 additional publications) represents a considerable influence (**Table 5** and **Figure 2**).

One might object that the experiments of the Allensbach Institut für Demoskopie about the extent to which different coverage figures depend upon whether many publications, or not so many are included in the investigations, were not conducted at strictly comparable times of the year. Unfortunately it was

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TABLE 4
Does the relationship between qualifying and non-qualifying categories affect the values for 'yesterday's' reading?

Replication in Austria (women, 16 years of age or more)

Half-split experiment
 Card shuffling (14 publications)
 General filter: read or leafed through in the last 12 months

	YES	NO (skipped out)
Recency When did you last read or leaf through?	<p>Model A</p> <div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;">1. Yesterday</div> <div style="border: 1px solid black; padding: 5px;">2. Day before yesterday</div>	<p>Model B</p> <div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;">1. Yesterday</div> <div style="border: 1px solid black; padding: 5px;">2. Within the last seven days 3. Within the last 14 days 4. Within last three months (or longer ago)</div>
Proportion between qualifying and non-qualifying period	1:2	1:4
Probability for the qualifying category	p.33	p.20
Index 'yesterday' Gross sum of exposures (1:6 categories = 100)	105	100
	n = 429	n = 407

Source: IMAS, Linz, Archives No.691, July 1981.

impossible to do this for financial reasons and for reasons of timing. Nonetheless, seasonal influences can largely be excluded. According to an AG.MA analysis of the 1980 MA, the monthly values for the gross sum of exposures to magazines differ only between 98 and 102 from the annual index of 100.

If the publishing houses find greater seasonal differences in the circulation figures, they are either not measurable using this type of investigation or the increased number of readers-per-copy in periods with a lower circulation makes up for them.

As with the investigation of the influence of the

number of qualifying and non-qualifying categories upon coverage figures (**Figure 1**) and based upon the available information, we are trying to quantify the change of coverage figures to be expected on average if the number of titles included in the investigation is increased (**Figure 2**).

We must assume that in an investigation of some 120 magazines, a coverage level reduced by about 20 percent will result in comparison with an investigation using only 20 magazines (**Figure 2**).

In this connection, too, the greater sensitivity of monthly or bi-weekly publications again becomes

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TABLE 5
The influence of the number of magazines investigated upon coverage figures (rpi)
more publications = reduced coverage

Allensbach Archives, Population: 18 to under 60 years of age
Uniform question model: frequency question (with one filter category) and recency question (2 qualifying and 5 non-qualifying categories, p.29)

Source (IfD no.):	4015A/4017 Oct./Nov.'82	4686 Nov./Dec.'81	4693 Winter'82/'83	4007/4009 April to July '82
Publications included:	17	28	41	135
n =	2296	2241	2251	5555
	%	%	%	%
<i>RPI</i>				
<i>Weeklies</i>				
Stern	-	27.4	22.6	22.0
Hörzu	-	31.3	23.0	24.3
Tina	-	8.2	7.4	7.2
Der Spiegel	-	14.9	13.7	11.9
Wirtschaftswoche	-	1.7	1.6	1.2
Bild am Sonntag	-	20.4	20.4	18.4
Die Zeit	-	4.8	4.5	3.6
<i>Bi-weeklies</i>				
Weitbild	3.6	2.7	-	1.8
Brigitte	20.4	20.5	16.4	13.7
Freundin	13.2	-	10.2	8.5
Für Sie	15.7	15.5	11.5	9.4
Auto Motor und Sport	10.1	13.1	10.0	7.1
<i>Monthlies</i>				
Capital	-	7.5	6.2	4.9
Das Beste aus	-	-	-	-
Reader's Digest	-	15.7	12.1	10.4
Burda Moden	-	17.1	12.7	10.5

Note: Complete representation insofar as at least three results are available

evident. When an increased number of publications is included in the investigation, these lose more in terms of coverage figures than do weekly magazines.

As was shown at the New Orleans symposium, the structure of magazine audiences does not vary greatly if publications with a high level of coverage and those with a low level are juxtaposed. Here, too, we can prove that the reduction of coverage figures that occurs when an increased number of titles is included does not just affect occasional and sporadic readers but also regular readers (Table 6).

We are very much interested in international comparative data on this subject.* We are particularly interested because in Germany we are confronted by the finding of the Arbeitsgemeinschaft Media-Analyse (AG.MA) which does not support our findings from four investigations during the years '81/'82 to the extent

* In addition to experiments using a greater or a lesser number of publications for the 'recency' technique, also in findings in connection with the 'through-the-book' technique.

TABLE 6
Reduced coverage figures for a greater number of publications

The reduction does not only affect the occasional and sporadic readers, but also regular readers to at least the same degree

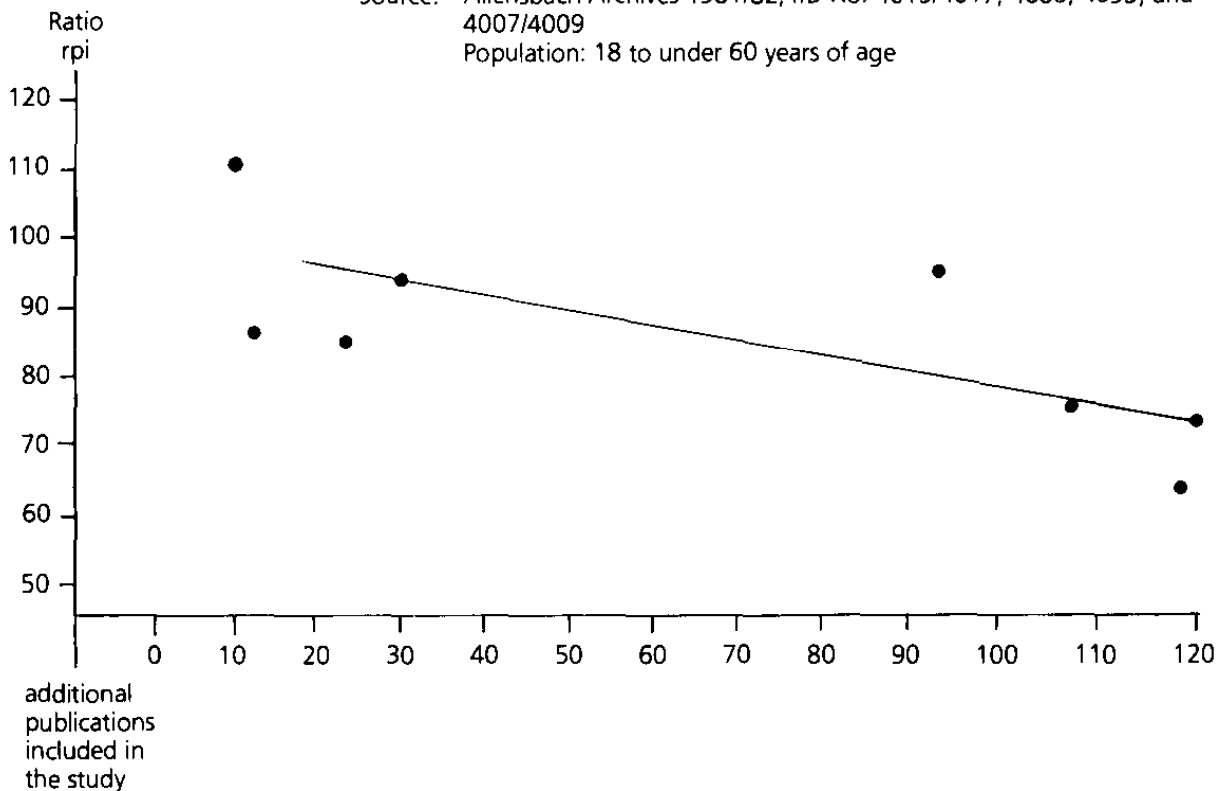
Source (IfD no.):	4686 Nov./Dec. '81	4007/4009 April to July '82	Index
Publications included:	28	135	(4686 with 28 publications = 100)
n =	2241	5555	
Gross sum*	%	%	
Read-			
regularly or frequently	63.1	47.7	76
fairly often or from time to time	127.9	99.8	78
less frequently or less than once in the 12-fold publication interval	78.4	64.3	82
	269.4	211.8	79

*3 monthlies, 3 bi-weeklies and 2 weeklies
 population: 18 to under 60 years of age

FIGURE 2
The influence upon coverage figures of the number of magazines investigated (rpi)

An additional 40 to 50 publications reduces the coverage by approximately 10 ratio points

Source: Allensbach Archives 1981/82, IfD No. 4015/4017, 4686, 4693, and
 4007/4009
 Population: 18 to under 60 years of age



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expected: the rpi coverage figure for 56 additional magazines was only reduced by 2.3 percent instead of the expected approximately 12 per cent. (3)

But the question has to remain unanswered for the moment as to how much it is the superimposed influence of the different 'stamp of an institute' that is responsible for this. Only two of the six institutes contributing to the '82 MA (with 99 magazines) participated in the marriage experiment of the Konpress-Study (using 43 magazines).

A juxtaposition of MA coverage figures for 1972 with only 58 magazines included and for 1982 with 99 magazines included rather tends to corroborate our findings (Table 7).

TABLE 7
The influence upon coverage figures of the number of magazines investigated (rpi)

Another source: AG.MA 1972 and 1980,
Using the example of eight magazines

	1972	1982
Publications included:	58	99
n =	14,645	18,597
<i>RPI</i>	%	%
Weeklies		
Stern	19.7	17.0
Hörzu	30.1	26.6
Frau im Spiegel	7.0	6.2
Bi-weeklies		
Brigitte	12.0	9.5
Für Sie	8.8	6.7
Auto Motor und Sport	5.1	4.1
Monthlies		
Das Beste aus		
Reader's Digest	9.5	7.8
Burda Moden	8.1	6.6
	103.3	84.5
Index to be expected according to Figure 2	100	84
	100	91

14 years of age or more (probability sample).
Uniform question model with one qualifying category in comparison to 7 non-qualifying categories

The AG.MA in Germany will also have to concern itself with this problem. The comparison of results for the '72 MA with 58 magazines with those of the '82 MA with 99 magazines shows a reduction of coverage figures (rpi) by 14 percent. According to Allensbach investigations using an identical pre-choice question model and the same number of publications in the years 1976 and 1982, * however, the general reduction of magazine reading to be assumed for this period of time is only 7 percent.

Masthead cards as recall aids

The results are essentially the same no matter whether the respondents are presented with simple black and white masthead cards or whether they are presented with multi-coloured prints that are more similar to the original (Table 1). In 1982 we tried to expand our knowledge about the possible influence of differently designed masthead cards on coverage figures in another respect. We were concerned with the extent of the influence exerted on coverage figures by changes in the graphic design in comparison with mastheads used formerly, for example the size, emphasis on the title of the magazine (Hobby), modernization of the type (ACE Lenkrad), changes in or omissions of supplementary parts of the masthead (Leben & Erziehen), extensive abbreviations of the title or the presentation of a masthead card on which both the old and new masthead are shown (Deutsche Automobil Revue). In an Allensbach experiment conducted in 1982, we could not record any significant influences, with one single exception (Table 8). The exception was the Deutsche Automobil Revue. The use of and strong emphasis on the abbreviation 'd.a.r.' led to a significantly reduced coverage figure. Since then, the publishing company in question has given up this abbreviation.

TTB

False reporting of readership

We would like to add to the contribution we made at the New Orleans symposium with regard to one item. At the time we reported that we had obtained coverage figures some 70 to 90 percent of the figures for copies already published when we used advance copies, issues which had not yet appeared. In our view, the through-the-book technique does not necessarily measure the exposure to the specific issue but rather the probability of being exposed to an average issue of the magazine. One might

* Allensbach Archives, IfD No.3686 and 4695, housewives aged 16-65, 28 magazines, presentation of a list, read regularly or fairly regularly.

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TABLE 8
The influence of differently designed masthead cards (black and white) on coverage figures (rpi)

old masthead	new masthead
	
<p>rpi 3.2% n: 1575</p>	<p>rpi 2.4% n: 1637</p>
n.s.	
	
<p>rpi 2.2% n: 1575</p>	<p>rpi 2.6% n: 1637</p>
n.s.	
	
<p>rpi 4.6% n: 1637</p>	<p>rpi 3.9% n: 1575</p>
n.s.	

TABLE 8 (continued)

The influence of differently designed masthead cards (black and white) on coverage figures (rpi)

<p>old masthead</p>  <p>rpi 2.4% n: 1575</p>	n.s.	<p>old and new masthead</p>  <p>rpi 1.5% n: 528</p>
<p>old and new masthead</p>  <p>rpi 1.5% n: 528</p>	n.s.	<p>new masthead</p>  <p>rpi 0.6% n: 1109</p>
<p>old masthead</p>  <p>rpi 2.4% n: 1575</p>	***	<p>new masthead</p>  <p>rpi 0.6% n: 1109</p>

Note: Significance check of the difference of rpi-values through the critical ratio

n.s. = difference is not significant

*** = significant at the 1-percent level

For technical reasons, the masthead cards used can only be represented in reduced form.

Source: Allensbach Archives, IfD-No. 4015 and 4017, Oct./Nov. '82, 16 years of age or more. split-half technique, include among a total number of 17 magazines.

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object that non-readers, who do not subscribe to a magazine, and therefore cannot be familiar with it, also declare themselves to be readers when they are presented with an original issue, thus casting doubt on tests using the through-the-book method.

In 1981 and 1982 we conducted two investigations on this question. As **Table 9** shows, there is a strong and plausible relationship between the coverage figures ascertained by using the TTB technique and the possibilities of exposure, given the circulation figures in the area concerned (supplement rtv).

The investigation into the coverage of magazine X shows that the TTB technique does *not* result in claims that are bound to be false. A coverage of only 0.1 percent was measured for it in areas where this magazine is not distributed.

TABLE 9
Rpi according to through-the-book technique (TTB) in distribution areas of publications and non-distribution areas show a high reliability of information

Allensbach Experiments 1981/82

	TTB claimed readership*
Supplement rtv	
- in districts with a:	
60 percent or more coverage of households	50.4% (n = 109)
30 to under 60 percent coverage of households	46.9% (n = 194)
5 to under 30 percent coverage of households	12.8% (n = 249)
less than 5 percent coverage of households	3.8% (n = 1378)

Source: Allensbach Archives, IfD No.4002,
November 1981

Publication X	
in the federal state of North Rhine-Westphalia, the major distribution area	8.9% (n = 558)
in federal states in which this magazine is <i>not</i> distributed	0.1% (n = 1096)

Source: Allensbach Archives, IfD No.4008, May 1982

*definitely read or leafed through

CONCLUSION

There can be no doubt that minor changes in the investigation design substantially affect the measurement of readership. Coverage figures can be manipulated at will:

Coverage figures on a low level can be produced by

- a higher proportion of non-qualifying categories
 percentagewise
- the inclusion of a large number of magazines in an
 investigation

Coverage figures on a higher level can be produced by

- a lower proportion of non-qualifying categories
- the inclusion of fewer magazines in an investigation

It is the variation in influence depending upon type which makes such questionnaire changes particularly unsatisfactory.

In this situation, and in view of the present state of the art, the methods that have been suggested should certainly not be prescribed as long as we do not have satisfactory validation.

Although the task we face is difficult, we must keep trying to approximate to reality. In our opinion, technical measurements represent the first step towards our goal. The work done by our American colleagues from *Time*, Clark Schiller and Robert Schreiber, should be a great help.

Keeping diaries and making entries on reading is a method that does not strike us as being so promising. It is bound to produce values that are too low, since some reading is never reported. It becomes particularly difficult to ascertain the reading behaviour of occasional and sporadic readers, or of 'outside contacts'.

In our opinion, considerably more expensive approaches represent the only alternative — such as, for example, daily visits by interviewers to gather information about past reading behaviour, or the kind of technical measurement conducted by Professor Mihaly Csikszentmihalyi at the University of Chicago in connection with a project on 'psychological well-being'. There are wireless connections between the participants in the project and the switchboard, so that the way the subject feels at any particular point in the course of a day can always be checked on.

We would like to suggest a way of providing basic data for validation by gathering information from the respondents relatively frequently but without bothering them any more than necessary, by having them answering a question rather than making notes in a diary or something of the kind. We have in mind a mini-recorder which the respondent would carry around and which would automatically request him at regular

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intervals — perhaps every 2-3 hours daily — to remember and name all magazines he has read or looked at in the interim and about how much of the whole magazine this was, and to record these responses on tape in the same recorder. The technical production of such mini-recorders should not be a problem.

Let me offer some consolation: the knowledge we have gained about the manipulability of coverage figures by choosing different qualifying and non-qualifying categories and by using many publications in an investigation or not so many, can be very helpful under certain conditions in the development of simpler pre-choice question models to reproduce such 'solid gold values.'

REFERENCES

- 1 Tennstädt, Friedrich WR and Hansen, JL (1981) 'Validating the Recency and Through-the-book techniques' in *Readership Research: theory and practice, proceedings of the first International Symposium*, Henry, H (ed) p.106.ff
- 2 Tennstädt, Friedrich WR and Elisabeth Noelle-Neumann 'Measurement of Readership' *Journal of the Market Research Society* Vol **21** no 4. p.258
- 3 Scheler, HE (1982) 'Vorstellungen und Bausteine zum Partnermodell und seine erste Konkretisierung' *Media-Spectrum*, November pp.4.ff