

THE NEW CURRENCY IN PRINT MEDIA - THE ADVERTISEMENT EXPOSURE PROBABILITY

Michael Walter, Gruner + Jahr AG & Co

Television has long had a means of ascertaining audience ratings right down to the very second. Even the viewer coverage of individual spots during specific commercial blocks can be accurately determined. Nonetheless, in print media, reader per issue has always been the common currency used to measure readership coverage. In 1992, the print media forged ahead with a new method of measuring the potential contact of an advertising medium (reader per page) in addition to the existing method of measuring the media exposure probability (reader per issue). This new method, however, did not encounter much acceptance among advertisers and ad agencies alike. But, the demands for more precise planning criteria became, if anything, louder.

The print media took yet another step forward: The Media Analysis, known as the MA, will in the future be adding the latest research method - the advertisement exposure probability - to its stable. You're undoubtedly asking yourselves what this new method is. The definition is already set:

$$\text{Advertisement exposure probability} = \frac{\text{No. of ad pages seen}^*}{\text{No. of ad pages printed}}$$

* Pages with a minimum share of 25 percent ad space.

It wouldn't make any sense to ask the respondent during the MA interview how many of the ads he or she has seen in any given magazine, so the AG.MA, that is the MA study group, developed a three-phase model for putting this new method into practice.

The copy test is one very practical method of determining the attention readers give to a given advertisement. But just how high does the validity of a copy test rate? In answer to this question, the first level of measuring the advertisement exposure probability consists of a validation test, based on an observation experiment. In order to evaluate the actual reliability of copy tests, interviews were carried out in ten (10) German cities during February and March 1995 among fifty (50) readers of fifteen (15) different magazines and five (5) daily newspapers, following careful observation in a studio of the test persons' reading behavior.

The readers were then screened according to sex, age and number of issues per title read.

Sample

	Total
No. of cases	995
Sex	
Men	48.6
Women	51.4
Age	
up to 19 years old	7.8
20 - 29 years old	21.0
30 - 39 years old	21.7
40 - 49 years old	14.2
50 - 59 years old	25.9
60 or more years old	9.5
No. of issues per title read	
1 out of 12 issues	3.9
2 to 3 out of 12 issue	17.2
4 to 5 out of 12 issue	18.9
6 to 7 out of 12 issue	15.5
8 to 9 out of 12 issue	14.8
10 to 11 out of 12 issues	9.1
12 out of 12 issues	20.4
Amount of time spent reading in studio	
up to 10 minutes	24.1
up to 20 minutes	28.5
up to 30 minutes	19.5
up to 40 minutes	26.2
longer	1.8

All the test persons received the latest issue of a magazine in the studio before its actual on-sale date. Reading behavior was recorded on a video camera set up on a mirror-top table. This way the reader's eye movements (pupil) could be recorded for each and every page. Even the smallest contact with a page was registered by coders.

This method's reliability was sufficiently proven in a control coding including 21,786 of the total 135,890 pages. The correlation of both measurements resulted in $r = 0.92$.

The readers' habits were evaluated according to three categories:

- did not turn to this page
- did turn to this page
- stared at something on this page

The intensity of the reader's eye contact with a page made no difference in the category "stared at something on this page." Contact with a page takes place as soon as the reader's eye wanders to a certain page and stares at something on that page, regardless of how long.

The basis for this test consisted of 135,898 pages, 61,065 of which contained at least 25 percent ad space and 41,344 of which were full-page advertisements.

A copy test was carried out with the test persons three days after they had had no contact of any kind with the magazines or newspapers. The respondents were asked for each page if they had turned to it. Provided their answer was yes further questions then followed according to the scale below:

- seen or read **everything**
- seen or read **part** of the page
- seen the **pictures**, read the headlines
- seen or read **nothing**

Following the above questions the results of the reader observation and the copy test were compared.

	Observation	Copy Test	Index CT : observ.
Turned to page			
every page	87.3	88.4	101
pages with min. 25 % ad space	86.1	86.6	101
full-page ads	84.9	85.4	101
Seen/read part of page			
every page	79.1	59.1	75
pages with min. 25% ad space	73.8	46.0	62
full-page ads	70.1	38.8	55

The percentage of pages turned to, as recorded in the copy test, was approximately equal to the number measured during the reader observation. As a result the copy test does offer a considerable degree of certainty in terms of pages actually turned to; this applies equivalently to pages with ad space as well as to purely editorial pages.

However, qualified exposure (seen or read something on a certain page), particularly with advertising pages, are greatly underestimated in copy tests. The exposure ratings for ad pages as recorded in the copy test are 40 index points below the actual exposure observed.

A correction of these figures, therefore, is absolutely indispensable. The answer does not lie in merely modifying the copy test, but rather in a calculation model from which the actual number of ad pages seen can be concluded from the copy test results.

A statistical analysis of the above figures in context has proven that the number of qualified ad pages used under reader observation can be most precisely estimated (45 % coefficient of determination) from the copy test results using multiple regression analysis.

This new instrument provides us with the means of re-calculating the ad usage figures in copy tests which, to date, have always been far too low. These estimates become all the more accurate when demographic reader data and specific magazine characteristics are included in the regression analysis.

Use of multiple regression for re-assessing the copy test figures for pages seen or read with a minimum of 25 percent ad space can be presented as follows:

	Share coefficient of determination %	Regression coefficient b
Share of pages with min. 25 % ad space turned to acc. to copy test	40.9	0.5938
Share of pages with min. 25 % ad space seen/read acc. to copy test	2.5	0.0944
No. of magazine pages	1.0	- 0.0274
School education	0.2	- 1.2227
Age	0.1	0.0356
Reading frequency	0.2	3.5406
Reading time	0.2	0.0952
Constant		26.1278
Multiple correlation r =		0.6714
Coefficient of determination	45.1	

It seems quite appropriate to include individual magazine characteristics in the multiple regression as these have a significant influence on the use of each page.

Seen/read something on the page

	Observation	Copy Test	Index CT : observ.
No. of cases	135,898	135,898	
Total magazine pages			
up to 100 pages	85.6	73.1	85
up to 200 pages	83.8	68.0	81
200 or more pages	75.2	51.2	68
Percentage of pictures			
up to 20 %	69.1	49.8	72
21 - 49 %	79.0	59.5	75
50 - 99 %	80.5	59.8	74
100 %	77.4	57.9	75

Following use of the regression the calibrated copy test results are sufficiently reliable when compared to the rates actually observed.

Example:

Seen/read something on the page

	Observation	Copy Test following regression	Difference
No. of cases	995	995	
Sex			
Men	78.5	78.2	- 0.3
Women	79.9	80.3	+ 0.4
Age			
up to 19 years old	81.0	82.0	+ 1.0
20 - 29 years old	75.0	75.7	+ 0.7
30 - 39 years old	79.5	78.4	- 1.1
40 - 49 years old	79.1	79.0	- 0.1
50 - 59 years old	81.5	81.4	- 0.1
60 or more years old	80.5	81.2	+ 0.7

The object of the second phase of the model is to derive valid advertisement exposure probability factors for the different magazines and newspapers.

The individual magazines are typologized according to criteria such as editorial profile, layout, copy price, publication frequency, readership, etc. It is probable that in the future there will be 10 principle magazine types, each composed of three to four magazine titles and three newspaper groups, i.e. newsstand papers, regional and national papers. Two hundred and fifty (250) copy test interviews will be carried out per title based on the aforementioned interview method .

The regression formula will be applied to these results.

The advertisement exposure probabilities thus obtained will then be incorporated into the MA in the third and final stage of this model. To date, these exposure probabilities (reader per page) were transposed by fusing the data from a parallel wave with the MA data. This new model does away with this complicated method. The advertisement exposure factors from the calibrated copy tests can be directly incorporated in the MA, thus avoiding the huge additional work and cost involved in carrying out a parallel wave.

The prerequisite is a segmentation method which is also used for compiling media exposure probabilities (reader per issue). This involves segmenting the magazines and newspapers on the basis of the advertisement exposure factors derived from the calibrated copy tests on the one hand and various magazine characteristics and readership data on the other. These segments are compiled in accordance with the MA print category so that a one-to-one incorporation from one segment to another is feasible. The segments are re-classified every year as advertisement exposure factors, magazine characteristics and readership data are subject to constant change.

This segmentation method reflects the original figures every bit as well as the fusion method whereby the readership figures from the parallel wave were calibrated and then incorporated in the MA. In fact, the spread between exposure factors and the coefficient of determination in the test evaluation was far higher based on this new method.

The MA, to be published the second half of 1996, will include for the first time the new advertisement exposure probability in addition to reader per issue. Whether or not our marketing partners will accept this new currency has yet to be seen.

