

## 7.1

### USING INFORMATION ON COPY AGE AND OWNERSHIP IN MAGAZINE SCHEDULING

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From the beginning of 1984 the UK NRS has asked questions on the age and ownership of all magazines read on the day before interview. This information has now been published so it is possible to explore the ways in which it can be used for scheduling purposes.

First let me make it clear that the data are not collected for all magazine reading events, but only those which happened to take place on the day before interview. This restriction was imposed to minimise the extra workload on the respondent (remember, at the same time we increased the number of titles covered by the survey to nearly 200), but it means that the data can only be used in the form of average weights applied equally to all readers of a publication or group of publications.

It would, of course, be more desirable to identify the age and ownership of all copies read in the most recent issue period, but this would very considerably increase the workload on all respondents and it was felt that this would harm the survey. The restrictions of the questions to yesterday reading, however, did have one beneficial consequence. It means that it is possible to be confident that the data are reasonably accurate because the memory period is so short.

Before looking at the results obtained, I would like to comment on the theoretical reasons why age and ownership considerations might be important to scheduling.

#### AGE OF COPY

The significance of this information stems from the fact that an advertising campaign is normally planned to have an impact on the market during a specific time period. Advertising effort should be integrated into other marketing activity and any impacts which fall

outside the campaign period will be thought to have much less value, or none at all. This is an especially important consideration for some monthly magazines because they are believed, rightly or wrongly, to have a significantly large and long reading tail. That is, they go on accumulating readers for months, or even years, after publication.

The new data will enable us to establish the amount of such reading, not in great detail it is true, but certainly with enough accuracy for most practical scheduling considerations.

#### OWNERSHIP OF COPY

In this case the significance of the information stems from the extent to which the ownership of the copy is likely to be indicative of the relationship between the reader and the publication. There is some evidence from other NRS work that readers of magazines which they bought for themselves are likely to spend more time reading the publication than other readers, and are also likely to have an above average probability of looking into a spread. For example, NRS work into the Meaning of Reading, shortly to be published, has shown that the average at home reading time for colour supplements delivered to the house or bought by the respondent or some other member of the household was 27 minutes, against ten minutes for all other copies.

Both time and repeat reading could be important to an advertiser because they mean that any advertisement is likely to have a higher probability of being seen, and seen more than once, by a personal copy reader than other readers.

Apart from this greater likelihood, personal copy reading could also be important because of the incidence of

## USING INFORMATION ON COPY AGE AND OWNERSHIP IN MAGAZINE SCHEDULING

### 7.1

presenter effects or transferred values. That is, the extent to which the communication achieved by an advertisement is affected, in some way, by the publication in which it appears.

I have no doubt in my mind that such interactions exist and that they can be either beneficial or negative, but I also believe that they operate in a selective manner, and are neither easy to predict nor to research. It seems clear to me, however, that there are two distinct factors at work; publication image and reader frame of mind, and that both could well operate differently for different campaigns. I know, however, that this is a debatable matter, so at this stage it is best to rest the argument on the importance of personal copy reading on the grounds that they are likely to be more exposed to the advertisements carried.

#### READING DAYS

This new information could, of course, be applied to schedules calculated in the normal way, using the Average Issue Readership measures, but I suggest that this would be failing to take full advantage of the data now available.

One characteristic of a magazine campaign is that coverage will be accumulated over a number of weeks or months as the publications on the schedule attract their full readership, while another characteristic is that magazines are picked-up by their readers on a number of different days and hence the advertisements they contain stand a chance of being seen more than once.

This means that if we are undertaking an analysis of how a magazine schedule distributes its advertising impacts over time, we need to take into account the distribution not of readers, but of reading days.

Using the new NRS results this can now be done. **Table 1** shows the total number of reading days per copy for

different groups of publications. This measure does not fully relate to ad exposure probabilities, because we have no measure from this survey of the average proportion of pages seen per reading day, but it is certainly one step closer to this objective. Reading days per copy is also a convenient unit to use when thinking of the spread of exposure opportunities over time and the importance of personal copy reading.

As will be seen the range of reading days per copy is wide, varying from just under five for the general and women's weeklies to over 20 for the special interest monthlies and the bi-monthlies. Bearing in mind that these are total figures, being made up of repeat reading by the same individual and reading by different individuals, they would seem to make considerable sense. It will not surprise anyone to find a very high figure for the programme magazines, while there is a general pattern that the longer the publishing period the more reading days per copy.

This seems reasonable, partly because the less frequently published titles tend to have more pages and partly because the reader has more time in which to read them. Total reading days per copy is not, however, a very useful measure since advertisers think in terms of coverage and frequency achieved within a population, so in the second and third columns I have shown the number of readers per copy and, by division, the number of reading days per average issue reader.

Both these latter two measures need to be interpreted with caution. This is because of the likely effects of those twin biases, replicated and parallel reading errors, which affect all readership estimates, such as the UK NRS, which use a Recent Reading technique. Replicated reading arises wherever there is a repeat reading of the same publication on two or more days, while parallel reading occurs wherever two or more copies of the same

publication are read on the same day. Replicated reading results in an over-estimate of Average Issue Readership, while parallel reading gives rise to underestimation.

A full analysis of the impact of these factors on the evaluation of schedules is outside the scope of this paper, but from one viewpoint this is not important. This is because these errors do not affect the age and ownership of the copy being read, but only the way in which the total number of reading days accumulated by a copy is divided between repeat reading and additional coverage.

It is true, of course, that coverage estimates are normally looked upon as the most important single measure and for interest therefore in Table 2 I have divided the estimate of reading days per reader into those accumulated by regular readers and those by all other readers.

This analysis produces some very interesting results.

(1) Regular readers read on many more days than do other readers. In so far as there is a close link between regular reading and personal copy reading this result supports the argument that regular readers have a higher level of exposure to advertisements carried than other readers.

(2) The fact that the average number of reading days for other readers is less than 1.0 for some publication groups means that there is a fault somewhere.

This could arise from the fact that some other readers fail to claim a yesterday reading event, which we know from the Meaning of Reading research does happen, or because Sunday is an above average day for reading, which seems likely. The point about Sunday reading is relevant because the current design of the yesterday questions omits Sunday reading, for technical reasons.

(3) Notwithstanding the under-

estimation of the number of reading days for other readers it is clear that apart from the bi-monthlies the number of reading days for them is not going to be much in excess of 1.0.

This is an important result because it puts an upper limit to the level of replicated reading over-estimation arising from such readers.

To return to the main theme of this paper: assessing the impact of copy age and ownership on scheduling, I have argued that it is more meaningful to use reading days as the unit for this purpose rather than a simple measure of reading, so in Table 3 I show the total number of reading days for each publication group, analysed by the age of the copy being read.

It will be seen that there are large differences, ranging from the weekly programme magazines which build-up their impact in the shortest time period to the various groups of monthlies, with fairly large reading tails.

Irrespective of any debate about the value to an advertiser of first time against repeat exposure, it is clear from this analysis that the different publication groups will work very differently within a schedule, with individual titles showing even greater variations. In most cases titles which build-up impact rapidly will be thought to have a commercial advantage, but before such considerations can be taken into account in scheduling it will be necessary for planners to decide what distribution of impacts is most desirable.

In the first place, therefore I thought it would be useful to take an actual woman's magazine schedule and examine how it achieves its impacts over time. It will then be necessary to consider if this was what was intended and, if not, how it should be improved.

USING INFORMATION ON COPY AGE AND OWNERSHIP IN MAGAZINE SCHEDULING

7.1

The schedule being examined was made up of weekly and monthly women's magazines and involved 18 insertions. Table 4 lists the titles and shows the insertions week by week. As will be seen, they fall within a 10-week period, but for purposes of the calculations, I have evaluated the impact of the schedule over four four-week periods and in total. Since it was also desirable to include an estimate of the build-up of coverage as well as the distribution of reading days, I have assumed that the early readers are likely to read on more days than average and that these would be more spread over time. Having to make such an assumption is unsatisfactory, but nothing better could be done with the data available.

As has been commented, the schedule is made up of weekly and monthly publications, but it will be seen from Table 3 that in the case of the women's titles there is little difference in the build-up pattern so it seemed to make sense to simplify the calculations by using the same allocation of exposures as follows:

Issue	Age in issue periods	Build-up	
		Cover %	Reading days %
Current	0	65	60
Previous	1	20	15
Recent	2 and 3	5	10
Old	4 and more	10	15

This pattern was applied to the schedule by noting, for example, that the first insertion in *Woman* fell in the first week in the second period so the assumption was made that 90% of the cover achieved by that insertion and 85% of the reading days would fall within the four weeks of Period II.

Tables 5 and 6 present the results obtained from such an analysis carried out insertion by insertion. It is

quite time-consuming since we have not yet written any computer programs to handle the work.

Table 5 shows the results on a cumulative basis for the first 16 weeks of the campaign, plus a total figure. In addition to coverage and reading days it includes a calculation of the number of reading days per 100 women; a convenient measure we use as the equivalent to the main measure used to evaluate a television campaign, namely TVR's. In both cases a measure of 10 means that the number of impacts achieved was equal to 10% of the population, made up of 1% of the population standing a chance of seeing the advertisement 10 times, 10% of the population once, or any equivalent combination.

From Table 5 it can be seen that the schedule takes some time to achieve its ultimate coverage and impact figures, but this point is made even more clearly in Table 6, which shows the performance of the schedule period by period. From this it will be seen that the coverage achieved in any single period only just reaches 40%, with a maximum frequency of impact, per four weeks, of 2.8. Of course, everyone has known that print campaigns take time to work, but I wonder the extent to which this has been taken into account in planning and assessment. When spelt out in this way there can be no doubts.

For example, from Table 6 it can be seen that the campaign achieved maximum cover and impact in Period II, right at the end of the campaign, while in Period I the coverage was only 34% and the frequency 1.9. Little wonder that it might have been thought to get off to a slow start.

This leads me to make a point of major significance. There is no doubt that the introduction of time into print schedule evaluation must make the appraisal of schedules more realistic, but it will place heavy demands on both agencies and advertisers to determine the best pattern of impacts over time.

## USING INFORMATION ON COPY AGE AND OWNERSHIP IN MAGAZINE SCHEDULING

### 7.1

It will no longer be possible to judge schedules on a crude time-free basis of coverage and frequency. 'When' will have to enter into the equation.

So far, for this illustration I have used average results for groups of publications both in terms of reading days and copy age. Individual title data is available, however, but because of sample size problems it will not be reliable enough to justify using for any individual monthlies, except the largest two or three, although for the weeklies the position will be better. However, while individual title differences may marginally effect title choice, the biggest determining factor by far affecting the impact of a schedule over time will be the balance of the schedule between weeklies and monthlies or bi-monthlies.

Finally, we need to think about the impact of copy ownership data on schedule evaluation. I have argued earlier on in this paper that there are two possible reasons why it could be important to be able to identify the importance of personal copy reading, because personal readers have a higher likelihood of exposure to advertisements and because they are more likely to experience 'transferred values'.

Table 7 shows the results obtained for the eight titles on the schedule we have been examining. It is clear from this table that for these titles two clear patterns emerge. The large circulation broad interest weeklies,

*Woman* and *Woman's Own*, have a lower level of personal reading, while the large circulation but older appeal weekly, *Woman's Weekly*, together with all monthlies have a higher level of personal reading.

The differences between these two patterns are fairly marked, but if schedules are evaluated on the basis of reading days, care would have to be taken to avoid making a double allowance for the importance of personal copy reading. If personal copy readers are more likely to see an advertisement merely because they read on more days, then allowance for this factor would already have been made.

To conclude. It would seem clear from these analyses that the biggest impact of these data will arise from the linking of reading days with time in the evaluation of schedules. Primarily this is because it will lead to a more realistic understanding of what is being bought and, possibly, to a debate as to which pattern of exposures over time is likely to be best. In the case of seasonal brands this will be simple, but for all the others it is doubtful if we will ever get beyond conventional wisdom. After all, in the much simpler case of 'burst' versus 'drip' advertising on television, conventional wisdom still rules. The target objective is bursts of 400 TVR's a month, or whatever, largely depending, it would seem, on the budget available and TV costs.

USING INFORMATION ON COPY AGE AND  
OWNERSHIP IN MAGAZINE SCHEDULING

**TABLE 1**  
Reading days per reader

<i>Publication group</i>	<i>Reading days per copy</i>	<i>Readers per copy</i>	<i>Reading days per average issue reader</i>
General weeklies	4.7	4.3	1.1
Special interest weeklies	8.5	6.5	1.3
Programme magazines	13.4	3.1	4.3
Woman's weeklies	4.5	3.5	1.3
Bi-weeklies	8.4	4.9	1.7
General monthlies	14.5	6.0	2.9
Special interest monthlies	23.0	10.5	2.2
Women's monthlies	11.0	6.5	1.7
Bi-monthlies	24.4	4.9	5.0

**TABLE 2**  
Reading days by frequency of reading

<i>Publication group</i>	<i>Proportion of reading days accounted for by regular readers %</i>	<i>Proportion of readers who are regular %</i>	<i>Reading days per:</i>	
			<i>regular reader</i>	<i>other reader</i>
General weeklies	72	62	1.3	0.8
Special interest weeklies	73	62	1.5	0.9
Programme magazines	94	81	4.9	1.4
Women's weeklies	73	67	1.4	1.0
Bi-weeklies	75	51	2.5	0.9
General monthlies	79	54	4.3	1.3
Special interest monthlies	63	37	3.7	1.3
Women's monthlies	62	36	2.9	1.0
Bi-monthlies	56	30	9.2	3.1

**USING INFORMATION ON COPY AGE AND OWNERSHIP IN MAGAZINE SCHEDULING**

**TABLE 3**  
The age of the copy being read

Publication group	Total reading days %	Age of copy			
		Current %	Previous %	Recent %	Old %
General weeklies	100	67	13	9	11
Special interest weeklies	100	60	15	10	15
Programme magazines	100	84	10	6	0
Women's weeklies	100	58	14	9	19
Bi-weeklies	100	70	13	5	12
General monthlies	100	51	13	8	28
Special interest monthlies	100	49	15	14	22
Women's monthlies	100	59	14	8	19
Bi-monthlies	100	53	16	11	20

*Current* - issue on sale at the time of the interview  
*Previous* - issue 1 issue old  
*Recent* - issue 2 or 3 issues old  
*Old* - any older issue

**TABLE 4**  
Schedule used for example

Four week period	I				II				III			
	1	2	3	4	1	2	3	4	1	2	3	4
Woman					x				x			
Woman's Own	x				x				x			
Woman's Weekly		x				x				x		
Woman & Home		x				x						
Good Housekeeping						x				x		
Family Circle	x							x				
Living				x				x				
Options	x					x						
Total insertions	3	2	-	1	2	4	-	2	2	2	-	-
Period totals		6				8				4		

*W* = weekly; *M* = monthly

USING INFORMATION ON COPY AGE AND  
OWNERSHIP IN MAGAZINE SCHEDULING

**TABLE 5**  
Cumulative schedule evaluation

<i>Periods</i>		<i>All women</i>				<i>Total</i>
		<i>I</i>	<i>II</i>	<i>III</i>	<i>IV</i>	
Coverage	%	33.6	49.2	57.8	59.3	60.2
Total reading days (m's)		15.0	39.1	65.2	71.6	79.2
Reading days per 100 women		65	170	284	312	345
Average frequency		1.9	3.5	4.9	5.3	5.2
<i>Coverage with:</i>						
1 - 3 reading days	%	32.3	34.9	30.4	29.0	27.1
4+ reading days	%	1.3	14.3	27.4	30.3	33.1

**TABLE 6**  
Period by period schedule evaluation

<i>Periods</i>		<i>All women</i>				
		<i>I</i>	<i>II</i>	<i>III</i>	<i>IV</i>	<i>Remainder</i>
Coverage	%	33.6	39.2	40.4	12.8	9.4
Total reading days (m's)		15.0	24.0	26.1	6.4	7.7
Reading days per 100 women		65	105	114	28	33
Average frequency		1.9	2.7	2.8	2.2	3.6
<i>Coverage with:</i>						
1 - 3 reading days	%	32.3	33.7	33.9	12.7	9.1
4+ reading days	%	1.3	5.5	6.5	0.1	0.3

**TABLE 7**  
Ownership of copy

	<i>Total reading days %</i>	<i>Personal</i>	<i>Other members of household</i>	<i>Other</i>
Woman	100	38	18	44
Woman's Own	100	36	16	48
Woman's Weekly	100	53	10	37
Woman & Home	100	55	12	33
Good Housekeeping	100	51	16	33
Family Circle	100	52	12	36
Living	100	54	12	34
Options	100	54	26	20