AGE OF ISSUE IN THE TTB READERSHIP MEASUREMENT

Hastings Withers, PMB, Canada

Synopsis

Selecting the correct age of issue to be shown to respondents in a Through the Book study is a critical element of the TTB methodology. This paper analyses PMB 96 readership results to assess whether there were indications that age of issue for publications should be adjusted.

Conclusions were:

1   The issue aging strategy is correct in almost all cases.

2   There were some exceptions relating mostly to publications with special frequency or distribution patterns - for these publications using older issues could be more appropriate.

3   For monthlies and others published less often, it appears that the average readership score is relatively stable with respect to age of issue, and is not sensitive to it.

Introduction

The through-the-book method (TTB) uses actual copies of the publications being measured. Respondents are asked to leaf through selected articles, commenting on them before the critical readership question is posed. The process of actually handling the publication, looking at and commenting on the articles, gives the respondent the opportunity of a considered and accurate reply to the question of whether they have read the publication.

However, there is a well-known difficulty. Which issue to show the respondent? The most recent issue may have been available only for a few days, so even regular readers may not have read it yet . At the other end of the spectrum, use of an older issue runs the risk that some respondents may have forgotten it by the time of the interview.

The object of the readership study is to measure readership for the average issue. In TTB method we do this by showing all issues (for monthlies) and every other issue (for weeklies). The average issue readership is obtained by taking the average of all the measured issues. So the question becomes, not which issue to use, but when to use it, at what interval after publication, or, in the accepted terminology, what "age of issue"?

## Theoretical accumulation of readership

Early experimenters with the TTB system (see list of references at the end of this paper) concluded that TTB interviewing could start at a date when around 95% of the readership had accumulated. This point was about 2-3 weeks for weeklies, and 5-6 weeks for monthlies. The graph below illustrates this growth pattern for monthlies:

Chart 1

Chart 1 - ACCUMULATION OF READERS
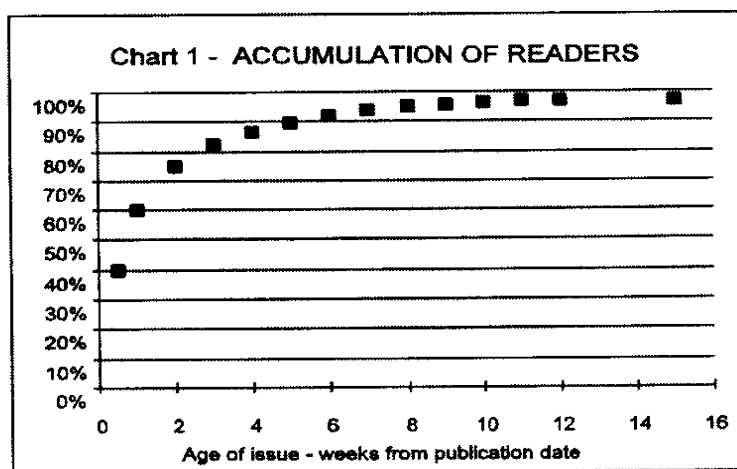
Effect of forgetting

At the other end of the time scale, a TTB implementation using issues that are too old could suffer underclaim because respondents were failing to claim forgotten readership. As the age of the issue increases, the impact of forgetting would increase, thereby decreasing the measured readership score. Putting the audience growth and decline together we obtain this graphical representation of readership as measured by TTB.

Chart 2 - Three phases of measured readership in TTB
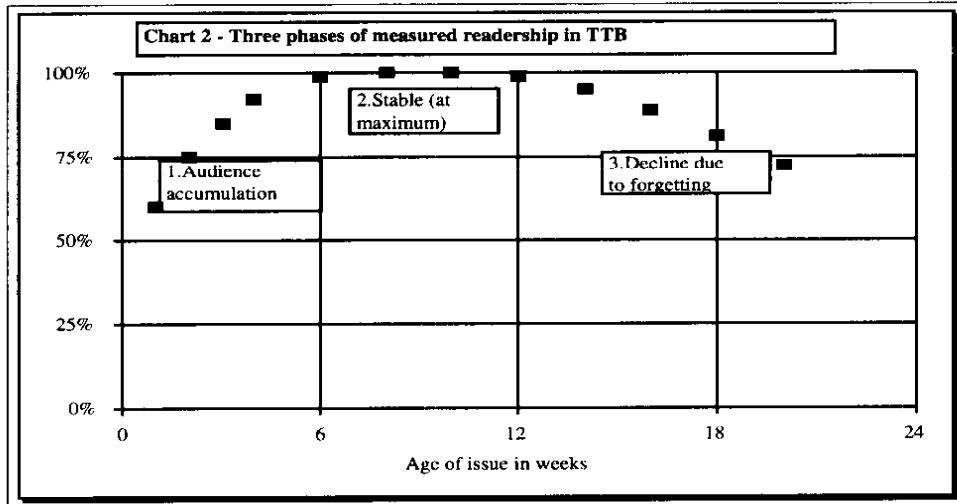
The hypothesis

A successful TTB implementation measures the publication in the period where the graph is horizontal. The hypothesis underlying this investigation is that, if we find readership is level with respect to time, it corresponds to that maximum.

But there is a quandary. Suppose the TTB study is indeed successful in measuring readership during the flat part of the curve. It would be convenient to believe we are measuring the maximum, but, mathematically speaking, there are other hypotheses that could explain the horizontal nature of the curve.

Hypothesis	1	A maximum as in chart 2
	2	A minimum
	3	A step on an upward slope
	4	A step on a downward slope

This study, concentrates on whether we have found the level zone. The study does not prove that the level zone is indeed a maximum, and not a step or a minimum as in hypotheses 2, 3 or 4. To prove that, we would have to do a TTB readership study analysing the readership growth and decay with issue ages deliberately too old and too young! Such a project, apart from being prohibitively expensive, would not make sense unless there was evidence to suggest there was a problem.

Fortunately, if we do find a level zone, then both common sense and empirical evidence allow us to discard at least hypotheses 2,3 and 4. The Simmons and Newsweek audience accumulation studies, referred to earlier, showed that audiences are continuing to grow in the 3 to 6 week time period, so it is quite unlikely that there is an early maximum readership which is somehow being missed. That disposes of hypotheses 2 and 4. With regard to no. 3, there is no evidence to support the concept of audience growing in steps, so if we find a flat zone, it is reasonable to conclude it is a maximum.

Qualification

The model of three distinct phases is an oversimplification. Audience growth and forgetting can occur simultaneously, so that it may be impossible to find a point at which TTB measurement is totally free of both effects.

The assumption underlying this analysis is that, if a level phase is found, it corresponds to a period where both audience growth and forgetting are small, so readership has effectively maximised and forgetting has not yet had a material impact.

This is a reasonable assumption because it is hard to imagine the two independent variables (growth and forgetting) perfectly offset each other unless they are both relatively small.

Scope

This examination used the PMB 96 national readership study, based on a sample of 20,000 aged 12 year of age and over. It reviewed the readership of each publication by week. It reviewed the readership of publications individually and in groups to observe the slope of the readership curve by age of issue. If there is an upward slope it would indicate that the age of issue being used is too young. A downward slope would indicate the impact of forgetting, and suggest we were using too old an issue.

Sample balancing

In a perfect study of this type, each week should be a balanced sample. The PMB sample is not built that way, and could not be balanced weekly. Thus differences that might show up could be a consequence of sample differences. At the level of a single publication in a single week, such sample differences could be quite severe.

A number of tactics are used to stabilise the data:

1   For a single publication, we group all instances where issues had similar age. For example, for monthly magazine X, we look at its readership when the May issue is 7 weeks old, and combine it with the cases where the June issue is the same age, and the July issue etc.

2   Grouping adjacent weeks together, so that we find the average of across all issues when the age of those issues is say 7 or 8 weeks.

3   Grouping adjacent weeks together in different ways, to see if there's the same conclusion. For example after looking at weeks 7 & 8 (step 2), now look at weeks 6 & 7 together.

Use of read to screen ratio

The Read-to-screen ratio is used in this analysis, rather than directly using readership. This reduces the possibility that a higher or lower readership score in a given period merely reflected the sample that happened to screen in.

Margin of error

Confidence limits are calculated as though each sub-sample was balanced and representative of the population. It is likely that the true margins would be larger than these quoted in this report. On the total 20,000 sample, a typical margin of error calculated in this way is ±10%.

Dividing the sample into sub samples by age of issue has the effect of increasing the error range considerably. For example, for monthlies it would increase to around ±20% or higher.
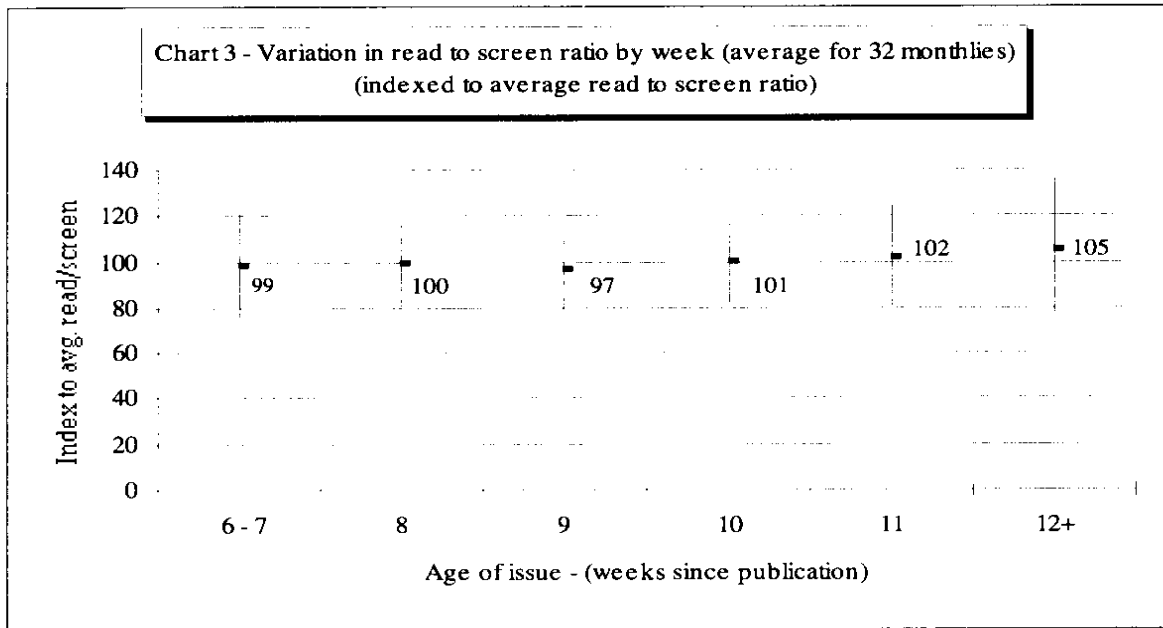
Findings

PMB uses four broad guidelines for determining the age of issue, Monthlies, newsweeklies, TV listings, and others. A chart comparing age of issue practice is shown in the appendix.

1. Monthly publications

Generally monthlies are used in the field 6 weeks after publication, and measured for 4 weeks until aged 10. We include among monthly publications those published 10 or 11 times per year. These publications sometimes have a longer age of issue, up to 15 weeks in some cases. There are however only a small number of such cases and they are added into the figures for age of issue 12 weeks or more.

Chart 3 below shows how the average read to screen across all monthlies is very consistent by age of issue. (The bars show the upper and lower bounds for the 95% confidence intervals.) These figures are clearly in the middle "level phase".

The same conclusion - no age of issue effect - holds true for the individual titles, with a single exception of a home decoration publication which exhibited a different pattern of audience growth. This case is discussed more fully below in the paragraph on exceptions.

Chart 3 - Variation in read to screen ratio by week (average for 32 monthlies)
(indexed to average read to screen ratio)

A further important finding is that this "level phase" extends beyond just the 4 weeks needed for the conventional TTB measurement. There is no evidence of forgetting having an impact on those publications measured beyond 11 weeks. This implies that the readership measure is less sensitive to age of issue than is supposed.

2. News weeklies

For newsweeklies, the readership results are almost identical in the two weeks of measurement (see table 1). Newsweeklies are measured in the field 3 weeks after publication, and replaced every 2 weeks. It is possible therefore to compare only the first week with the second one for each of the different publications. For the national publications, a difference of approximately 10-15% (for English and French respectively) would be required for statistical significance (at 95% confidence). A difference of 30% would be required for the smaller regional publication.

Table 1 - Read to screen ratio - wk 1 vs wk 2

		Index to avg. read/screen	
		second wk.	first wk.
English	A	101	99
	B	101	99
	C	99	101
French	A	100	100
	B	101	100
	C	96	104
Regional	A	89	110

There was one exception to this pattern, a publication that is editorially close to newsweeklies, but with a unique publication schedule (monthly for some parts of the year and fortnightly at others). As discussed below in the paragraph on exceptions, the evidence suggests this might not be the optimum age of issue strategy for this particular publication.

3. TV listings

For TV listings, as for news weeklies, readership levels by week are stable, taking into consideration the estimated margin of error of the order of 10-15%. For one of the publications a relatively small number of interviews were conducted with an older issue, but again there was no significant difference.
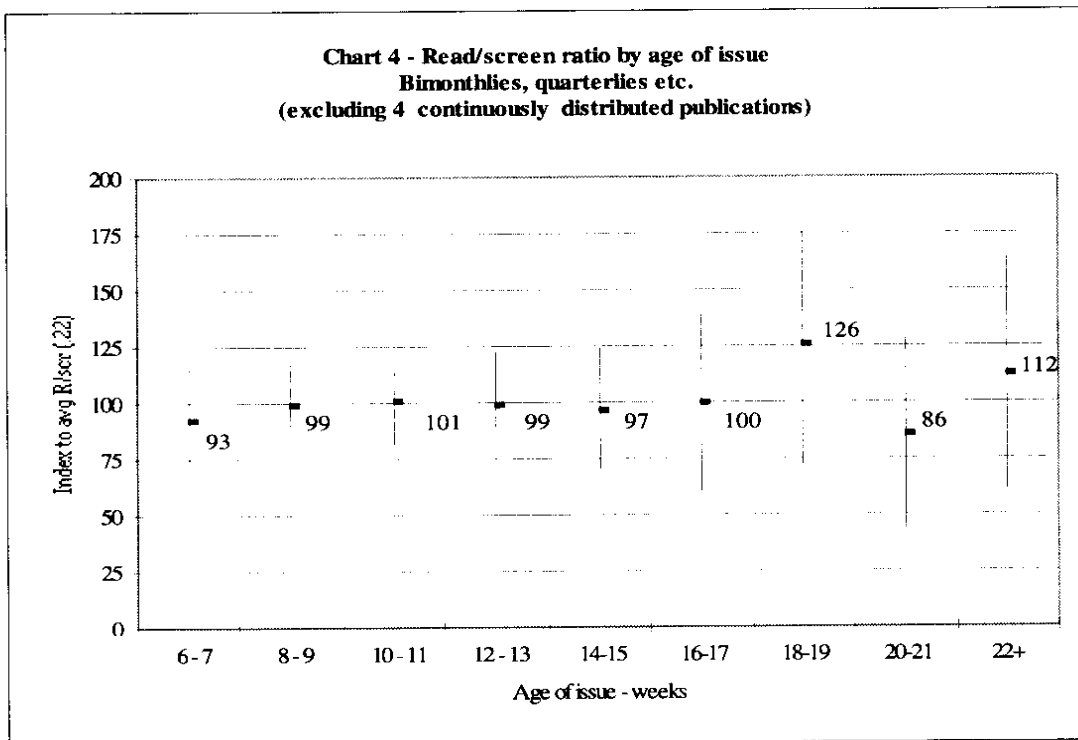
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Table 2 - Read to screen ratio - (TV listings)

Index to avg. read/screen

TV listings		first wk.	second wk.	third wk.
English	A	105	95	105
	B	101	99	
French	A	99	101	
	B	100	100	
Regional A		104	97	

4. Published less often than monthly
(23 Bimonthly, quarterly, and other)

The age of issue practice for publications in this group is to start using the issue when aged 6 weeks, and continue using it until the next issue is available. Depending on the publishing interval, this could be after 2 months (for a bimonthly) or after 3 months for a quarterly. The entry point of 6 weeks has been used for a long time, following the example of monthlies, but there is little empirical evidence for this category of publication.

We found that there were some publications for which this aging practice may not be appropriate. This is a sub group of publications distributed continuously throughout the publication interval. These are reviewed separately in the paragraph on exceptions, and are excluded from the results below.

Chart 4 - Read/screen ratio by age of issue
Bimonthlies, quarterlies etc.
(excluding 4 continuously distributed publications)

From chart 4 we see ...

1 Taking into account the confidence limits, (represented by the vertical bars), no consistent growth or decline pattern is exhibited for this group of publications.

2 There is a much more variation than had been seen for monthlies and weeklies, this is attributed to the smaller sample sizes.

3 One way to resolve the apparent levels of "bounce" in chart 4 above is to recalculate the readership results for all these publications based on weeks 8 to 16 or 10 to 18. The average readership changes by less than 1%. This suggests the readership figures are relatively insensitive to the age of issue, as was found for monthlies.

5. Exceptions

1   Among the monthlies was a single exception: a home decorating publication published 10x a year. It has two issues
        which have a much longer life prior to the release of the next issue. Its readership continues to grow well past the 6
        week start that PMB has customarily used (see table 3):

Table 3 - Read to screen ratio by age of issue

Read to screen ratio - by week

7	8	9	10	11	12	13	14	15
.15	.18	.17	.20	.26	.24	.26	.40	.47

On its own, this evidence gives little guidance as to the correct age of issue strategy for the publication, and further
investigation is warranted.

2   Among weeklies, one exception was noted. This publication, editorially close to newsweeklies, changed its
        publishing frequency, from monthly to a combination of fortnightly in spring and fall, and monthly at other times.
        The issue aging strategy was to start measuring it at 3 weeks, the same schedule as other news oriented publications .
        However, the read to screen ratio in week 3 is significantly lower (index of 58 vs. average), indicating that such a
        strategy might not be optimal. (Table 4).

Table 4- Read to screen ratio by age of issue

Index to avg. read/screen

wk3	wk4	wk5	wk6	wk7+
58	100	106	105	92

In retrospect, that issue aging approach had a hidden assumption, that readers might change behaviour to follow the
change in publication frequency. It is perhaps more likely that many readers do not change their reading behaviour,
and continue with their regular pattern, what ever that is. This would suggest an aging strategy of avoiding the
earliest week when there is a significantly lower read to screen ratio.

3   Within the group of publications published less than monthly, there was a sub group comprising four publications
        distributed evenly over the course of their publication interval, (rather than being all distributed at once by mail or
        news-stand).

        This sub group of publications contains the only two cases where there is a statistically higher readership level in the
        final weeks of measurement (table 5). This suggests the possibility their readership continues to grow, and that it
        would be appropriate to use a different age of issue pattern, using older issues after they have completed their
        distribution.

Table 5 - Read to screen ratio by age of issue

Read to screen indexed to average - by age of issue
(italics indicate statistically significant @ 95%)

	6to9 wks	10 to 13	14 to 17	18 + wks
Mag 1	88	85	115	*125*
Mag 2	110	88	104	100
Mag 3	101	95	*127*	
Mag 4	**105**	**86**	**88**	**112**
Average	101	88	108	112

Conclusions

PMB's issue aging strategy appears correct in almost all cases. Except for special cases noted, there is no indication that the age of issue is too young, which would show up as increasing readership by age of issue. Nor was there indication of declining readership due to forgetting.

There were some exceptions, which in the majority of cases was related to special publishing factors (frequency or distribution). In these cases it appears some minor adjustments to the aging strategy would provide satisfactory results.

For publications published monthly and less often, the evidence suggests that the readership level is not sensitive to the age of issue, and, importantly, there was no evidence of decline in readership scores due to using issues that were too old.

References

1   The study of Readers Total Experience with Magazines - W.R. Simmons 1975

2   Newsweek's Exploration of Magazines' Daily Audience Accumulation 1977

3   Analysis of readership levels by age of issue -Montreal International Readership Symposium - H. Withers 1983

Appendix
PMB Age of Issue Schedule

	Typically Published	Used in field	For how long	Avg issue age
Monthlies	1st of month	6 weeks later	4 weeks	8 weeks
News weeklies	Monday	3 weeks later	2 weeks	4 weeks
TV listing publications	Saturday	9 days later	2 weeks	2.3 wks
Less often than monthly	1st of every other month	6 weeks later	8-9 weeks	10.5 wks