

# Magazine readership: is there something wrong?

by

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In the last decade the increasing importance of Media as an agency function has meant that the Media Research section has expanded considerably. Neil Shepherd-Smith now has a staff of two executives and a junior. As well as providing all figures and research data for the media planning/buying groups, the section appraises new surveys and research material, is responsible for media education and training and keeps the agency and clients informed on important media developments.

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For as long as most of us can remember, there has been one comparatively calm haven in the stormy controversial seas of press readership research: the National Readership Survey average-issue readership technique. There have been occasional ripples, such as the concern over the readership levels of Sunday Newspapers in 1964, and some apparent discrepancies between results for 1967 and 1968 coinciding with a change in research supplier, questionnaire and sample size. But compared with the waves created by noting scores, page traffic, product/media data, intensity of reading, computer models or practically any of the other techniques that have raised their heads above the waters from time to time during the last 15 years or so, the NRS average-issue figures have on the whole provided a tranquil stability which many people have found most comforting and which over the long period has instilled a certain amount of confidence. When for years life goes on smoothly and in much the same way, we tend to assume everything is 'all right' and in the end forget there is a problem to be solved. It is with a certain deal of regret, therefore, that I would ask the gentle reader to keep as open a mind as possible and just take a look at the data we are using today.

Let us assume for a start that the NRS average-issue technique is quite adequate. Certainly, the results produced seem to be officially regarded as reliable because in fact the NRS 'readership' figures are used to modify the probabilities obtained from the reading frequency claim data collected in the survey. "... the IPA has decided that, in interpreting this reading frequency information, they will regard as the true 'meaning' of a given frequency statement the actual proportion of the group making that statement who were 'readers' as measured by the traditional question. This means that the group of people making any particular frequency claim about any particular publication are each being assumed to have a 'reading probability' estimated from the proportion of the group who are readers of the publication in the traditional sense"<sup>1</sup>. The reasons for this are clearly explained in "The development of reading frequency scales" by T. Corlett and D. W. Osborne<sup>2</sup>, an excellent document which well

repays careful reading.

One should be quite clear of the differences between the 'theoretical probabilities' and the 'observed probabilities' derived from the readership question. If somebody claims to read three out of four issues, in theory his probability of reading any given issue is three quarters or 0.75. However, if out of 100 informants making this claim we find not 75 'readers' (according to the traditional NRS question) but say 39 then the observed probability will be 39/100=0.39. It is possible to work out an average-issue readership by using the probabilities for each frequency claim multiplied by the number of people making that claim, and then summing the results. If we use the observed probabilities the 'readers' for each frequency claim will of course sum to the average-issue readership for the publication (indeed the probabilities have been calculated to ensure that they do). If on the other hand the theoretical probabilities are used, the results may be very different, as the example below shows.

**Table 1**

Adult readership estimates derived from 'observed' and 'theoretical' probabilities - *Daily Express*

Frequency claim	Profile claimers %	Observed adult probability	Readers %	Theoretical adult probability	Readers %
6/6	20.34	.917	18.65	1.0	20.34
5/6	2.06	.674	1.39	.833	1.72
4/6	1.32	.472	.62	.667	.88
3/6	2.93	.337	.99	.5	1.46
2/6	3.89	.233	.91	.333	1.30
1/6	4.27	.135	.58	.167	.71
1/6	2.82	.058	.16	.083	.23
0/6	62.37	-	0	0	0
	100.0		23.30		26.64

Source: NRS July 1971 - June 1972

In the 1965 IPA validation study for frequency scales, a comparison was made with readership estimates derived from what is called the 'editorial interest' technique, since as Corlett and Osborne pointed out "One of the most reliable known methods of obtaining a direct estimate of a person's frequency of reading is actually to show him a number of successive issues of the publication and get him to say, after careful examination of them, which he has seen before"<sup>2</sup> (This method while giving highly satisfactory results is usually considered too expensive and impractical when examining a large number of publications.)

In every case, Corlett and Osborne found that the theoretical probabilities (for all scale positions greater than 0) were *overestimates* when compared with the observed probabilities based on the editorial interest technique. Thus readership estimates derived from the frequency questions were higher than the observed readerships.

If using the latest NRS we examine readership estimates derived from reading-frequency questions compared with the standard NRS average-issue readerships, we also find that for dailies, Sundays and weeklies the frequency claim method based on theoretical probabilities are greater in every case.

**Table 2**

'Average-issue' readerships derived from frequency claims compared with traditional NRS estimates

Group	No. of publications	Gross % readership for publication group		
		NRS	Frequency	Difference %
National Daily Newspapers	8	106.8	125.3	+17.3
National Sunday Newspapers	9	165.9	183.3	+10.5
Weekly Colour Magazines	3	27.5	34.3	+24.7
General Weeklies	17	107.6	126.4	+17.5
Women's Weeklies	13	136.2	163.5	+20.1
General Monthlies	17	81.8	77.4	-5.3
Women's Monthlies	25	159.1	151.3	-4.9

For monthly publications, the frequency claim method *underestimates* compared with the standard NRS question. But why? Why should people who seem to consistently *overclaim* frequency of reading by an average of around 16 per cent for all dailies, Sundays and weeklies measured, suddenly start *underclaiming* when asked about monthlies? (Corlett and Osborne reported that "quite often the respondent was unaware of what the publication interval of the magazine was")<sup>2</sup>. And why should the frequency method underestimate now, when the 1965 validation study showed that it tended to overestimate?

We must remember that the 1965 study used the editorial interest technique to establish the observed readership probabilities, which produced for the *Reader's Digest* (the only monthly magazine examined) an overall average-issue readership estimate of 14.5 per cent compared with 20.6 per cent derived from the frequency claims and theoretical probabilities. A suggested explanation for this marked difference was that the four issues of the *Reader's Digest* used were "too young" and "may not have finished accumulating new readers"<sup>2</sup>.

The observed readerships for the four issues were in fact as follows:

Issue 1 month	old	14.4%
" 2 months	"	13.9%
" 3 "	"	14.6%
" 4 "	"	15.1%
<b>Average</b>		<b>14.5%</b>

It is interesting to note that the standard NRS question for the period January-June 1965 produced an estimated readership of 20.5 per cent for the *Reader's Digest*, a remarkably similar figure to the 20.6 per cent obtained by the frequency method in the validation survey, and which was regarded as an overestimate.

So let's get this straight. In 1965 the validation survey established that for *all types of publication* the frequency claims consistently *overestimated* readership as established by the well-proven if expensive editorial interest technique. In 1972 we find that the frequency claim method overestimates compared with the traditional NRS readership method for all publications except

monthlies where it apparently *underestimates*.

Well, both methods can't be right. Is the frequency method inconsistent from year to year or is it just possible that the NRS question for some reason overestimates the readership of monthly publications? Because if the frequency method on average overestimates the truth by around 15 per cent as the validation study indicated, yet underestimates the apparent NRS readership of monthlies by about five per cent one finds oneself asking what the NRS method is doing to the truth about monthlies! Is there any other information we can get from the survey which will help to prove what the truth is?

The two most reliable words in research are 'always' and 'never'. While it is very difficult to give a good estimate of one's frequency of performing an action, one could be pretty sure if one never did it, or did so every day. "How many chocolates (or smoked salmon sandwiches or women) did you have last year?" might not achieve an accurate numerical answer, but "All I could get!" or alternatively "Ugh! Never touch the beastly things!" would probably be fairly close to the truth. Belson and Agostini among many others have shown that in press readership research those claiming to see every issue (6/6 or 4/4) give much more reliable answers than those claiming to read less regularly, while those claiming never to see a publication give the most accurate answers of all.

In the NRS for each publication is given the percentage of those claiming 'never' to see it, and therefore, this figure subtracted from 100 per cent gives us the percentage of the population who 'ever' see it.

If *all* readers of a publication were 'regular' readers, in other words saw every issue, then there would be no potential growth from the average-issue readership which would equal the 'ever' readership. The higher the percentage of 'irregular' readers among the average-issue readers, the more the average-issue readership can grow to the 'ever' readership. Indeed the relationship between a) the regular readers as a percentage of average-issue readers, and b) average-issue readers as a percentage of 'ever' readers is remarkably consistent for dailies, Sundays and weekly magazines as the following table shows:

**Table 3**

**Regular readers (6/6) and (4/4) percentaged on average-issue (NRS) compared with percentage average-issue readership of 'ever' readers**

Publication	Gross % readerships for publication group					Index
	1 Regular 6/6 or 4/4 %	2 Average issue %	3 Regular/ average issued %	4 'Ever' read %	5 Av. issue 'ever' read %	
Dailies (8)	80.4	106.8	75.3	191.5	55.8	1.35
Sundays (9)	146.9	165.9	88.5	224.1	74.0	1.20
Colour Magazines (3)	21.6	27.5	78.7	50.8	54.2	1.45
General Weeklies (17)	79.3	107.6	73.7	206.6	52.1	1.42
Women's Weeklies (13)	96.7	136.2	71.0	249.5	54.6	1.30
General Monthlies (17)	33.4	81.8	40.8	144.1	56.8	0.72
Women's Monthlies (25)	58.4	159.1	36.7	291.5	54.6	0.67

Source: NRS July 1971 - June 1972

Again we see that the monthlies are completely inconsistent with the other publications, incredibly appearing to have a regular readership percentage *smaller* than the average-issue percentage on the 'ever' results, in other words, the complete reverse of what could be expected. It is interesting to note that if the average-issue readership were about 25 per cent smaller for the monthly magazines, the relationship between the regulars and average-issue readers and 'ever' readers would be completely consistent with the other publication groups.

**The amazing case of the *Illustrated London News***  
 From two comparisons a) frequency claims and the 1965 validation study and b) the regular and 'ever' readers

there is on the face of it something strange about the NRS method of measuring the readership of monthly magazines, producing significant overestimates. With this in mind then if a publication were to change its frequency of issue, for example change from a weekly to a monthly, then one would be most interested to see what happened to its readership. It just so happens that the *Illustrated London News* was removed from the NRS in April 1971 when it changed from a weekly to a monthly periodical, being re-inserted in the survey (as a monthly magazine) in January 1972. We therefore have a fair amount of data for the *Illustrated London News* for the period January-December 1970 (when it was a weekly) and also January-June 1972 (now a monthly). The comparison is fascinating:

**Table 4**

*Illustrated London News* – all adult readerships

Period	Circulation	NRS adult 'readers' 000	Readers/copy	NRS 'ever' read %
January – December 1970	51,217	407	7.9	3.9
January – June 1972	73,044	1,349	18.5	6.9
% change	+43%	+231%	+134%	+77

We are asked to believe that for a circulation increase of 43 per cent the readership has more than trebled since 1970, increasing the numbers of readers per copy by 134 per cent to a startling 18.5. On the other hand those claiming to 'ever' read have increased by 77 per cent which is far more in line with the circulation increase.

The only inconsistent figure is the average-issue readership for the new monthly *Illustrated London News*

resulting from the traditional NRS question. If there was any remaining doubt that the NRS standard question for some reason overestimates the readership of monthly magazines, surely the case of the *Illustrated London News* removes it.

But why doesn't the standard NRS average-issue question work for monthlies? Maybe we will get a clue if we look at the average probabilities derived for each publication group by using the NRS question.

**Table 5**

Average observed probabilities derived from frequency claims and NRS readership question

Frequency level	6/6	5/6	4/6	3/6	2/6	1/6	<1/6
Theoretical probability	1	.83	.75	.67	.5	.33	.25
Publication group							
Dailies (8)	.91	.67	–	.49	.34	.21	.13
Sundays (9)	.92	–	.53	–	.37	–	.23
Colour magazines (3)	.85	–	.46	–	.30	–	.19
General weeklies (17)	.89	–	.50	–	.35	–	.21
Women's weeklies (13)	.85	–	.49	–	.37	–	.24
General monthlies (17)	.88	.74	–	.65	.55	.43	.33
Women's monthlies (25)	.87	.75	–	.65	.53	.41	.32

Source: NRS July 1971 – June 1972

As we would by now expect, the monthlies differ markedly from the other publication groups but it is interesting to note that it is in the *irregular* readers that the differences are greatest. The monthly probabilities indicated by a circle are the only ones in the whole table greater than the theoretical probabilities; not only that, those for 2/6 and 1/6 are over twice as large as their equivalents for the Daily newspapers.

So the overestimate of the readership of monthly

magazines is caused particularly by an overestimate of the readership among those claiming to read less frequently.

Let us refresh our memories as to the exact question informants are asked: "When was the last time you read or looked at a copy of . . . it doesn't matter where?" (Coded as last four weeks for monthlies).

This question is asked because it is regarded as too impractical to establish people's readership of *actual*

issues of large numbers of different publications, especially if this involved interviewers transporting dozens of sets of back numbers. So the assumption is made that the total number of people who read an average issue of a publication during its life is equivalent to the number of people who have claimed to read any issue during the last publication frequency period, (taken as seven days for weekly magazines and Sunday newspapers, four weeks for monthlies and so on). A moment's pause for thought will show that this assumption is by no means always true. If an informant for a monthly magazine reads it on one occasion he can then be counted as a 'reader' if he is interviewed at any time during the next four weeks. But if he (or his equivalent) reads the magazine for a second time, his qualifying period is automatically extended for a further four weeks, and the 'readership' of the publication is artificially inflated. This phenomenon is called 'replicated readership', as opposed to the situation where readership is artificially deflated, called 'parallel readership'. Here if an informant suddenly acquires several issues of a publication and reads them all on the same day, he can only be counted as a reader once by the NRS question, though obviously if he had read the same issues at monthly intervals he (or his equivalent) would qualify as a 'reader' several times.

So replicated readership artificially *inflates* the readership estimate as established by the NRS question, while parallel readership *deflates* it. While both these effects are possible in theory and indeed likely to occur in practice, the official view is that they tend to be small and to cancel each other out, thus producing little effect on the overall estimate of average-issue readership. But do they cancel each other out? Replicated readership results from multiple pick-up of a given issue. Parallel readership results from perusal of several issues over a

very short time-period. For the regular readers, seeing each issue of a magazine soon after it appears, neither parallel readership nor replication are likely to matter, since they are correctly recorded by the NRS question as 'readers' anyway. It is among the irregular readers that the trouble lies. Because those reading say one out of six issues can easily suffer from replication if the magazine is picked up and read on more than one occasion. But these people could never see enough issues of the magazine to suffer from parallel readership which would redress the balance. So the NRS average-issue question can inflate the estimate of readership among irregular readers of magazines, but parallel readership, which could in theory compensate to some extent, cannot occur for these groups of readers.

As we have seen by the probability figures in Table 5, it looks as if for monthly magazines that is exactly what is happening. Monthly magazines have a far longer life than other publications, sometimes remaining in the home for years for reference and enjoyment, leading naturally to multiple pick-up and the phenomenon of replication. For regular readers this will have no effect on the readership, but the more irregular the readers, the worse the inflating effect distorts the NRS average-issue estimate.

If we assume for a moment that for monthly magazines those claiming one out of six issues and two out of six issues picked up the magazine again once on average outside the qualifying period, we can correct the discrepancy by halving the observed reading probabilities for those frequency claims, which will bring them into line with the probabilities observed for the other publication groups. In the same way we can reduce by one-third the probabilities of those claiming three out of six issues for monthly magazines. The probabilities for higher frequency claims we can leave unchanged.

**Table 6**

	Amended probabilities			Readership using amended probabilities	Readerships based on theoretical probabilities	% difference
	3/6	2/6	1/6			
General Monthlies (17)	.37	.22	.16	65.1	77.4	+18.9
Women's Monthlies (25)	.35	.21	.16	124.9	151.3	+21.1

In Table 6, it can be seen that if we then recalculate the average-issue readership using the amended probabilities for the irregular readers and the observed probabilities for the regular readers we arrive at results which are around 20 per cent below the readership estimates derived from the theoretical probabilities, which is in line with the other publication groups shown in Table 2. It is also interesting to note that the gross readerships from the amended probabilities (65.1 per cent and 124.9 per cent) are about 20 per cent below the unamended NRS readerships (81.8 per cent and 159.1 per cent) given in Table 2. And if the amended average-issue readerships are compared with the 'regular' readers and 'ever' readers, they are again much more in line with the other publication groups shown in Table 3 with indices in the last column of 1.13 for general monthlies

and 1.09 for women's monthlies.

At this point people tend to have several reactions. The first thought is that if the NRS question is over-estimating the readership of monthlies by a minimum of 20 per cent, it goes some way towards explaining the readers-per-copy figures for monthly magazines which have stretched the incredulity and niggled at the gut-feelings of media planners for years. Isn't it far more likely that the 18.7 adult readers-per-copy of *Practical Motorist*, or the 19.3 adult readers-per-copy of *Do-It-Yourself*, estimated in the current NRS are reflections of the number of people keeping the magazines and looking at them over and over again for reference purposes rather than passing them on from household to household. The multiple pick-up phenomenon is undoubtedly very valuable and should be taken into account in

media planning because of the added *frequency* the magazine gets. But that is a very different thing from being given a misleading idea of the *coverage* of the magazine from an inflated readership estimate.

Accurate readership research is extremely difficult. It is beset by potential dangers: the fallibility of human memory, the difficulties of accurately quantifying human behaviour, the tendency to exaggerate the readership of prestigious publications, or even plain lying! But what is being suggested here is something different: that even if people's memories were perfect and they told the exact truth, the readership question itself will exaggerate the readership of monthly magazines due to replication. The error is not just in the practice but in the theory.

So the second reaction is to question why nobody has pointed out the anomalies before. And the fantastic answer is that they have. Over ten years ago, Dr. Belson drew attention to the problem in his "Studies in Readership"<sup>3</sup>. In 1962, the Thomson Gold Medal and Award was offered for the best solution to precisely the same problem, that of replication. The Thomson Gold Medal Committee set out the problem very lucidly in their introduction which is well worth re-reading.

Referring to replication itself it was stated "There is evidence that for some monthly magazines this source of error can result in the readership figures produced by current survey methods being almost three times as large as they should be. And while this 'replicated readership' may be of some value to the advertiser, it is not what the readership survey is supposed to measure . . ." <sup>4</sup>. The award was won by Messrs. T. Corlett, B. J. Pretty and L. J. Rothman, though the judges published several other papers as well, because of their technological and methodological interest. In all the papers submitted, there seemed little doubt of the inadequacy of the NRS average-issue question:

"It is our view that the discomfort caused by the 'replication bogie' and the facts of respondents memory failure render the present IPA readership technique demonstrably inadequate for monthly periodicals. A new way of measuring these audiences must therefore be found immediately . . ." (Schlaeppli and Nuttall)<sup>5</sup>.

" . . . it is now established that - because of readership replication - a right assessment of the audience reached would still not be possible even if these actual facts were exactly known . . . the only logical conclusion is to reject the IPA research technique particularly when applied to monthly publications." (Agostini)<sup>6</sup>.

Splendid! Except that ten years later we are still using the same old NRS technique in this country, though elsewhere in the world the problem is being taken more seriously. In South Africa for example, following papers by Moolman, Coburn and Langschmidt<sup>7</sup> and <sup>8</sup>), the NRS Validating Committee has suspended use of the traditional UK average-issue question, and commissioned urgent research work to establish a more valid method of magazine readership.

## Conclusion

I have tried to show that based on a few calculations using the NRS data for July 1971 - June 1972 there is something definitely wrong with the average-issue readership estimates for monthly magazines.

a) Compared with readerships derived from the theoretical frequency claims, the NRS question produces readership estimates greater for monthly magazines, though smaller for all other publication groups. The frequency claims have been shown in the 1965 validation study to overestimate compared with the widely accepted editorial interest technique.

b) Unlike readerships for other publication groups, the NRS readerships for monthly magazines are completely inconsistent with replies to the 'every issue' and 'ever read' questions.

c) According to the NRS the *Illustrated London News*, on becoming a monthly, apparently more than trebled its readership when its circulation went up by only 43 per cent over the same period.

d) The problem of the NRS readerships for monthly magazines lies largely in the *irregular* readers where the observed probabilities are inconsistent with those for other publication groups. When the probabilities are adjusted to a more realistic level, the average-issue also becomes more acceptable based on other criteria.

e) The over-estimates of NRS readership among irregular readers of monthly magazines is likely to be caused by the 'replication' effect, while the compensatory 'parallel readership' phenomenon cannot occur.

Michael Bird in his editorial (ADMAP, November 1972) suggested that research should be as clear and as boring as a piece of plate glass. If in this case, we have for ten years been making do with a window which enlarges and distorts some figures relative to others, then maybe it is time to call the glazier in.

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