

PURE RECENT READING: THE SOLUTION FOR NON-DAILY NEWSPAPERS?

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1. Introduction

In the process of changing from FRY to Recent Reading (RR) in Norway we met the *challenge of uneven publication periods*, which could be of general interest.¹

The RR model only holds up under a number of assumptions.² One is that the publication is exactly regular, with all publication periods of equal length. This implies that, strictly speaking, RR is unsuited for situations where the interval between successive issues varies, which happens to be the situation for many newspapers in Norway.³

As a consequence, *Pure Recent Reading* (PRR) has been developed in Norway. PRR calculates the number of readers for the actual issue periods, depending on the day of the interview and the day of publishing. For newspapers with only 2-6 issues weekly, PRR gives better estimates than the traditional RR. The problem has been recognised elsewhere by some people, but ignored.⁴

Based on 45,000 interviews included in the NRS between August 1999 and February 2001 and which have been reported twice, the PRR method of estimating readership figures will be presented and discussed.

Before we start discussing RR and possible approaches, we will provide a brief introduction of newspaper measurements in Norway and state a few benefits and drawbacks of FRY as compared to RR.

1.1 Newspaper measurement in Norway

Readership measurement in Norway has a relatively short history. The first official syndicated surveys were established in 1984 with “Riksundersøkelsen” for national newspapers and magazines, and “Handelsområdeundersøkelsen” for local newspapers. The readership figures for local newspapers were adjusted due to changes in circulation figures yearly from 1985 to 1989. Both surveys were face-to-face interviews and Recent Reading.⁵

In the late 1980s Gallup introduced telephone interviewing (CATI) in Norway. This improved the sample quality and interview control and made the FRY model feasible. The NAL (Norwegian Newspaper Publishers' Association) and Norsk Gallup therefore decided to use CATI FRY and establish a multimedia survey with marketing information – and Consumer & Media was born. The Norwegian NRS has since 1988 been integrated into the multimedia survey: Consumer & Media. The method of collecting and establishing readership figures has been stable ever since, but there's been a huge growth in marketing content, marketing tools, communication models and integration of other media.⁶ Consumer & Media is the most important tool for advertising consultants, media agencies, the media and advertisers for describing markets and target groups and for choosing media for advertising campaigns in Norway.

¹ This paper is a follow-up and further development of the EMRO paper *From FRY to Recent Reading: Newspaper measurement in Norway* (Futsæter & Holbæk-Hanssen, 2000).

² Michael Brown (1990, 1999) has discussed this problem several times.

³ The problem of irregular newspapers seems to be a particular phenomenon in immature markets. Erhard Meier follows up his EMRO paper (Meier 2001) and tells you more about this during the symposium.

⁴ See papers from the latest Worldwide Readership Symposiums.

⁵ Futsæter & Holbæk-Hanssen (2000).

⁶ Futsæter (2001A).

1.2 From FRY to Recent Reading

Both FRY and RR have their respective advantages and disadvantages⁷, but we have stayed with FRY in Norway until fall 2000 on the basis of an overall assessment.

Why was FRY chosen in Norway?

- The main element of the FRY model is yesterday's reading, *reducing memory errors*.
- AIR figures are not affected by *replicated reading* so that the number of readers is not over-estimated as is the case with RR. RR assumes that *replicated reading* and *parallel reading* are equal. However, it has been proven that they are not of equal size. *Replicated reading* is often greater than *parallel reading*. Moreover, the relationship between the two quantities varies from individual to individual and from medium to medium. Thus there is a risk of systematically biased results.
- FRY reduces the *telescoping effect*. The respondent has a tendency to recollect what he read most recently as being closer in time.
- In other words, FRY is *theoretically more correct* than RR.

Why switch from FRY to RR?

- FRY requires that the interview quality is very high and that an equal number of representative national interviews are conducted every day.
- Sometimes FRY yields reading probabilities of over 1.0 for small and low-frequency titles.
- FRY often yields unstable reading figures for small and low-frequency titles.
- Sometimes it is necessary to group small and low-frequency titles together in to compensate for small FRY samples.
- Alternatively, one can compensate by using longer interview periods to establish the reading probabilities for these titles, but then there is a risk of delaying real changes in actual reading habits.
- FRY requires a relatively large sample.
- FRY is perceived by many users as too theoretical and unmanageable, and the reporting routines are more demanding than RR.

1.3 New market demands

Competition from TV Meter data, with its detailed overnight reporting, and the Internet, with even faster and more sophisticated data, has put the print media under pressure from the media and advertising agencies. Moreover, newspapers have a growing desire to analyse seasonal and day-to-day changes themselves, so they can make strategic editorial assessments in an ever changing media landscape. In addition, there is concern that the Internet sites in particular will steal readership and advertising revenue from the printed newspapers – media cannibalism.⁸

It was not the overload of the survey, which was the reason for the change in the Netherlands⁹, but the demand for more frequent and detailed reporting, that forced Gallup to switch from FRY to RR in Norway.¹⁰ Although it was decided to change methods for establishing AIR levels from FRY to PRR (with some implications on questions asked), the rest of the NRS remained unchanged. The data was still to be collected by CATI, and the sample size was kept at approx. 30,000 interviews a year.

2. Recent Reading

2.1 What is Recent Reading?

Recent Reading (RR) continues to be the most widely used system today for estimating Average Issue Readership.¹¹ According to the most recent *Summary of Current Readership Research*, 55 out of 62 countries use RR. However, the details of the application of RR do *vary* from survey to survey.

Michael Brown has defined Recent Reading as follows:

- *The readership of an average issue is equal to the readership of any issue in an issue period.*¹²
- *Recent reading requires that the interviewer establish, for each measured title, when a respondent last read any issue. The proportion claiming to have done so within a period of time preceding the day of the interview and equal in length of the interval between the appearance of successive issues of the readership of the average issue.*¹³

⁷ Brown (1999), Carpenter (1999) and Shepherd-Smith (1999).

⁸ Futsæter (2001B)

⁹ Tchaoussoglou & Noort (1999)

¹⁰ Futsæter & Holbæk-Hanssen (2000).

¹¹ See Meier (1999A & 1999B) and the update of those reviews.

¹² Brown (1990).

¹³ Brown 1999).

2.2 Assumptions for Recent Reading

Michael Brown¹⁴ has pointed out that RR is based on certain necessary assumptions, which are less obvious and seldom discussed. Principals amongst these are that the RR model assumes that:

1. Publication is exactly regular, with all publication periods being the same length. This means that RR is basically unsuitable for any situation where the interval between successive issues varies.
2. Readership patterns are also regular. But the RR model is *not* invalidated by the fact that some people read 'early' and others 'late.'
3. Any issue's audience grows to its full size over a period of no longer than the publication period. This is of considerable importance, though not for newspapers, and is usually completely ignored.

These basic assumptions of the model are valid only under the well known limitations:

1. It is not true if a single issue is read over a period of time longer than the issue period; readership is then over-estimated (*'replicated reading'*).
2. Nor is it true if two or more issues are read within a period of time equal in length to the issue period; readership is then underestimated (*'parallel reading'*).

These strict principles and assumptions have been recognised elsewhere, but often ignored.¹⁵

2.3 The Recent Reading questionnaire

The wording of the recency question is:

Except today, when did you last read or look at?

- Yesterday (Monday)
- 2 days ago (last Sunday)
- 3 days ago (last Saturday)
- 4 days ago (last Friday)
- 5 days ago (last Thursday)
- 6 days ago (last Wednesday)
- 7 days ago (last Thirsday)
- Longer ago.

Help text, which indicates what day of the week, it was X days ago. In this case TUESDAY is the interview day.

Based on feedback from the interviews, we added a help text indicating what day of the week it was X days ago. The interviewers indicate that it is easier for the respondents to remember now when they last read the newspaper. This has had a significant impact on newspapers that are not published daily, which are not subscribed to, but only read once in a while. It is, for example, considerably easier now for the respondents to remember reading Sunday newspapers when they are interviewed on Friday – i.e., 5 days ago.

3. The Challenge

In the Norwegian newspaper market a great majority of the newspapers are issued with uneven publication periods. In fact, as many as 90%+ of all local newspapers are issued from 2 to 6 days a week. Every newspaper with 2-6 issues a week can be considered having uneven publication periods.

A newspaper issued **Monday, Wednesday and Friday** would have the following publication periods:

<u>Issue day</u>	<u>Publication period</u>	<u>Days in publication period</u>
Monday	Monday, Tuesday	2
Wednesday	Wednesday, Thursday	2
Friday	Friday, Saturday, Sunday	3

The average publication period for such a newspaper would be $(2+2+3)/3 = 2.3$ days.

The full picture for newspapers with 2-6 issues a week would then be:

- Average publication period for a **2-days-a-week** newspaper is **3.5 days**
- Average publication period for a **3-days-a-week** newspaper is **2.3 days**
- Average publication period for a **4-days-a-week** newspaper is **1.8 days**
- Average publication period for a **5-days-a-week** newspaper is **1.4 days**
- Average publication period for a **6-days-a-week** newspaper is **1.2 days**

¹⁴ Brown (1990).

¹⁵ Shepherd-Smith (1999).

As mentioned earlier, one of the basic assumptions for using the Recent Reading technique is that:

- The publication is exactly regular.
- All publication periods are thus of the same length.

4. Possible solutions

Bearing this in mind, one could argue that the recent reading technique is unsuitable for the great majority of newspapers in the Norwegian market, and even for magazines with an odd number of issues a year elsewhere. Nevertheless, we started to investigate the possibility of adapting the RR technique in spite of its "failing" one of the important basic assumptions of the model. We found little published research on this topic, so we started out with an open mind to see if there were ways of doing it.

4.1 Some averaging approaches

One obvious way was to use some kind of averaging and rounding of results from the RR question.

When running a simple frequency of the answers to the RR question we found the following distribution for a 3-day newspaper, issued Monday, Wednesday and Friday (n = number of weighted respondents):

Table 4.1.1 Frequency of the RR question for a 3-day newspaper (Monday, Wednesday, Friday)

Total	Yesterday	2 days ago	3 days ago	4 days ago	5 days ago	6 days ago	7 days ago	Longer ago
700	143	116	64	8	19	5	14	331

Having in mind that the publication period for this title is 2.3 days, there are at least four different ways of approaching an AIR calculation¹⁶:

- 1) Rounding the publication-period figure down to 2 days (the mathematically 'correct' way in this case), the AIR figure would then be: $(143+116)/700 = \underline{\mathbf{37\%}}$
- 2) Rounding the publication-period figure up to 3 days (the 'politically easy' way), the AIR figure would then be: $(143+116+64)/700 = \underline{\mathbf{46\%}}$
- 3) Using the publication-period figure of 2.3 as a theoretical input in estimating AIR, including Yesterday claims, 2-days-ago claims and 0.3 of 3-days-ago claims in the AIR figure (the theoretically 'correct' way), the AIR figure would then be: $(143+116+(64*0.3))/700 = \underline{\mathbf{40\%}}$
- 4) If we total all yesterday claims, plus the sum of 2-7 days ago adjusted for issue periods, we get the last example of AIR calculation. In the case above, the AIR figure would be the sum of yesterday for all days, plus 4/7 of the sum of days ago and plus 1/7 of the sum of 3 days ago: $(143 + (4/7*116) + (1/7*64)) / 700 = \underline{\mathbf{31\%}}$

If it is possible to extract more information from the collected data, such as day of interview and issue days, it would be possible to look at other approaches for calculation of AIR as well.

- 5) One last possible solution could then be to calculate AIR based only on the interviews conducted the day after the issue day for each title – counting the Yesterday claims. Again, we're using the three-day newspaper as an example, and the table now shows the distribution on the RR question versus day of interview:

¹⁶ There's a wide variety of approaches when looking at the details of readership surveys (Meier 1999B).

Table 4.1.2 Recent Reading versus day of interview for a 3-day newspaper issued on Monday, Wednesday and Friday

Issued **MONDAY** and **WEDNESDAY** and **FRIDAY**

		RR-claim								
		Total	Yesterday	2 days ago	3 days ago	4 days ago	5 days ago	6 days ago	7 days ago	longer ago
Total		700	143	116	64	8	19	5	14	331
Interview-day	Monday	100	2	1	40	0	3	1	3	50
	Tuesday	100	40	0	2	2	2	0	2	52
	Wednesday	100	5	35	1	1	10	1	1	46
	Thursday	100	44	0	9	0	0	3	1	43
	Friday	100	6	36	2	2	0	0	5	49
	Saturday	100	37	7	8	0	2	0	1	45
	Sunday	100	9	37	2	3	2	0	1	46

In this case the AIR figure would be: $(40+44+37)/(100+100+100) = \mathbf{40\%}$

However, the consequence would be that, in this case, we 'throw away' 400 perfectly valid interviews. For even smaller and more low-frequency newspapers this would definitely lead to a sample-size problem. Consequently, this method was rejected for our non-daily newspapers.

As we can see, these approaches yield quite different results.¹⁷ One could of course assume a pragmatic attitude and choose one of the approaches, claiming that all media covered are treated the same way. This assumption is easily proven wrong e.g. because of the rounding issues; If one chooses to adapt approach 1), newspapers with 2 and 4 issues a week would benefit (from rounding the publication-period figure up) whilst 3-, 5- and 6-days-a-week newspapers would suffer (from rounding the publication-period figure down). The conclusion was that neither of these approaches satisfied our needs for a robust model establishing AIR figures for non-daily newspapers.

Unable to find any extensive documentation on how e.g. 13-issues-a-year magazines or 51-issues-a-year magazines (parallel to our 2-6-issues-a-week cases with uneven publication periods) are treated in other surveys using RR as a method of establishing AIR, our search for a more sophisticated and robust method continued.

¹⁷ This has also been documented in other cases (Futsæter & Holbæk-Hanssen, 2000).

4.2 Pure Recent Reading - a feasible solution

As pointed out earlier, even after giving up FRY, the Norwegian NRS was decided to be run as CATI interviews. The reason was that the special Norwegian newspaper structure, with its large number of local and ultra-local newspapers, still called for quite a large sample and highly sophisticated sample structure, which within certain cost limits could only be achieved using Computer Assisted Telephone Interviewing.

However, we found that some of the ‘built-in’ advantages of our NRS conducted using the CATI system¹⁸ could be exploited in our effort to modify the RR model, so that it could be used even for irregular publications. These advantages are:

- Daily national representative sample
- Interviews distributed evenly across the days of the week
- Information on each newspaper’s issue days
- Information on which day each interview was conducted is recorded by the CATI system

Having this information at hand, we started playing with the idea of using the **actual publication periods** (as opposed to average publication period) as input to the RR model for establishing AIR levels for our non-daily newspapers. An illustration of how this is done for our 3-days-a-week (Monday, Wednesday, and Friday) newspaper would look like this:

Table 4.2.1 Issue periods and publication periods and Recent Reading counts for a 3-day newspaper issued on Monday, Wednesday and Friday

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon
Issued:								
Issue-period:								
RR-count for interview day:		Yesterday	Yesterday 2 days ago	Yesterday	Yesterday 2 days ago	Yesterday	Yesterday 2 days ago	Yesterday 2 days ago 3 days ago

The first step in this direction is again to expand the above Table 4.1.1 showing the distribution for the RR question, now broken down by interview-day. The expanded table (Table 4.2.2 below) now shows a cross-table between the *RR question and interview day* recorded with the CATI system. Counting the RR claims in the actual publication period would now give us an AIR estimate based on actual publication period.

¹⁸ See, e.g., Brown (1999).

Table 4.2.2 Recent Reading versus day of interview for a 3-day newspaper issued on Monday, Wednesday and Friday

Issued MONDAY and WEDNESDAY and FRIDAY										
	Total	RR-claim								
		Yesterday	2 days ago	3 days ago	4 days ago	5 days ago	6 days ago	7 days ago	Longer ago	
Total	700	143	116	64	8	19	5	14	331	
Interview-day	Monday	100	2	1	40	0	3	1	3	50
	Tuesday	100	40	0	2	2	2	0	2	52
	Wednesday	100	5	35	1	1	10	1	1	46
	Thursday	100	44	0	9	0	0	3	1	43
	Friday	100	6	36	2	2	0	0	5	49
	Saturday	100	37	7	8	0	2	0	1	45
	Sunday	100	9	37	2	3	2	0	1	46

The issue period for the Monday issue is Monday – Tuesday, and we'll count the respondents having the following claims to the RR question into the AIR figure:

Tuesday interviews →	Yesterday (Monday)	+	40
Wednesday interviews →	Yesterday (Tuesday)	+	5
	2 days ago (Monday)	+	35

The issue period for the Wednesday issue is Wednesday – Thursday, and we'll count the respondents having the following claims to the RR question into the AIR-figure:

Thursday interviews →	Yesterday (Wednesday)	+	44
Friday interviews →	Yesterday (Thursday)	+	6
	2 days ago (Wednesday)	+	36

The issue period for the Friday issue is Friday-Saturday-Sunday, and we'll count the respondents having the following claims to the RR question into the AIR figure:

Saturday interviews →	Yesterday (Friday)	+	37
Sunday interviews →	Yesterday (Saturday)	+	9
	2 days ago (Friday)	+	37
Monday interviews →	Yesterday (Sunday)	+	2
	2 days ago (Saturday)	+	1
	3 days ago (Friday)	+	40

AIR count → 292

AIR level: 292/700 = 41.7%

The same AIR calculation for a 2-day-a-week newspaper, issued Wednesday and Friday:

Table 4.2.3 Recent Reading versus day of interview for a 2-day newspaper is issued on Wednesday and Friday

Issued WEDNESDAY and FRIDAY									
	Total	RR-claim							
		Yesterday	2 days ago	3 days ago	4 days ago	5 days ago	6 days ago	7 days ago	Longer ago
Total	700	229	173	104	53	86	3	14	38
Interview day	Monday	100	7	10	71	0	12	0	0
	Tuesday	100	24	3	4	53	4	0	12
	Wednesday	100	9	8	4	0	65	0	7
	Thursday	100	80	4	6	0	0	3	7
	Friday	100	18	74	8	0	0	0	0
	Saturday	100	80	0	5	0	5	0	10
	Sunday	100	11	74	6	0	0	0	9

The issue period for the Wednesday -issue is Wednesday – Thursday, and we’ll count the respondents having the following claims to the RR question into the AIR-figure:

Thursday interviews →	Yesterday (Wednesday)		80
Friday interviews →	Yesterday (Thursday)	+	18
	2 days ago (Wednesday)	+	74

The issue period for the Friday issue is Friday – Tuesday, and we’ll count the respondents having the following claims to the RR-question into the AIR figure:

Saturday interviews →	Yesterday (Friday)	+	80
Sunday interviews →	Yesterday (Saturday)	+	11
	2 days ago (Friday)	+	74
Monday interviews →	Yesterday (Sunday)	+	7
	2 days ago (Saturday)	+	10
	3 days ago (Friday)	+	71
Tuesday interviews →	Yesterday (Monday)	+	24
	2 days ago (Sunday)	+	3
	3 days ago (Saturday)	+	4
	4 days ago (Friday)	+	53
Wednesday interviews →	Yesterday (Tuesday)	+	9
	2 days ago (Monday)	+	8
	3 days ago (Sunday)	+	4
	4 days ago (Saturday)	+	0
	5 days ago (Friday)	+	65
AIR count →			<u>595</u>

AIR level: 595/700 = 85.0%

This method, now called **Pure Recent Reading – PRR**, could easily be applied to any 2-6-issues-a-week newspaper in our survey, and the results look promising.

4.3 PRR and known RR issues

Three of the most discussed RR issues are:¹⁹

- *Any issue's audience grows to its full size over a period of time no longer than the publication period.*
- *Readership pattern is Regular.*
- *The readership of an average issue is equal to the readership of any issue in an issue period.*

Any issue's audience grows to its full size over a period of time no longer than the publication period

This is a basic assumption of the RR model, which from our point of view is met also when working with non-daily newspapers. Newspapers, as in our case, will probably have a considerable shorter life than a magazine, especially magazines of a general character, like hobby magazines. Furthermore, it's reasonable to assume that the longer the publication period of an issue, the higher the probability of reading it in a successive issue period. We assume that the audience of the non-daily newspapers grows to its full size for one issue before the next issue is on the doorstep.

The readership pattern is regular

The majority of readers of Norwegian newspapers are subscribers who receive their copy of the newspaper at their home on publication day. As 3/4 of the Norwegian newspapers are local, and read by 80-90% of the local population, and the readers often read 5-6 of the 6 latest issues, one can conclude that readership pattern for these newspapers is very regular.

The readership of an average issue is equal to the readership of any issue in an issue period

As we all know, the RR model contains two model biases; 'Replicated readership' will tend to inflate RR estimates, since it results in a respondent's probability of being counted as a reader being overstated, whilst parallel readership will lead to under-estimating audiences, since in this case the contact of one person with two or more issues is being counted as if there were only one.²⁰ The strength at which these two forces work, depends heavily on two conditions:

- The nature of the publication – news, entertainment, TV magazines, etc.
- The frequency at which the publication is published – issue-life

Generally, one could say that the less frequently a title is published, the greater the potential for problems in accurate measurement via RR due to replicated and parallel reading. As in our case, when dealing with newspapers published 2-6 times a week, which by nature have a short lifetime and contain mainly news-related content, the problems of replicated and parallel reading are quite limited compared to what one will experience when measuring, e.g., low-frequency magazines with the RR method.²¹

¹⁹ See, for example, Brown (1999), Carpenter (1999) and Shepherd-Smith (1999).

²⁰ Brown (1999).

²¹ Brown (1999) and Shepherd-Smith (1999).

4.4 Is PRR applicable to publications with even publication periods?

In our NRS we also measure titles with even publication periods, like Saturday/Sunday newspapers. What would happen if we used the PRR method (using actual publication period) to establish AIR figures for these titles, instead of the traditional RR method? Without even testing it, we can say that the AIR figures will be lower using PRR than using traditional RR, simply because, when using PRR, we're not taking into account every respondent claiming to have read the publication within the last week, but only those claiming to have read the publication in the most recent publication period (which can vary from 1 day to 7 days.) We'll look at another example to illustrate this:

Table 4.4 Recent Reading versus day of interviewing for a 1-day newspaper issued on Saturday

		Issued SATURDAY								
		RR-claim								
	Total	Yesterday	2 days ago	3 days ago	4 days ago	5 days ago	6 days ago	7 days ago	Longer ago	
Total	700	38	40	40	41	39	39	44	331	
Interview-day	Monday	100	1	39	0	0	0	0	1	48
	Tuesday	100	0	1	40	0	0	0	0	46
	Wednesday	100	0	0	0	41	1	0	0	46
	Thursday	100	0	0	0	0	38	0	1	48
	Friday	100	0	0	0	0	0	39	1	47
	Saturday	100	0	0	0	0	0	0	40	45
	Sunday	100	37	0	0	0	0	0	1	51

Using **traditional RR** to establish the AIR level for this title, we get: $(38+40+40+41+39+39+44)/700 = 40\%$

Using **PRR** to establish AIR level for this title, we get: $(1+39+1+40+41+38+39+40+37)/700 = 39\%$

Although the difference between the two figures in this case is quite small, we can conclude that we'll nevertheless find differences going in this direction – PRR will always yield lower AIR estimates than RR – Why?

It's easy to understand the pure mathematical reasons simply by looking at the table, but when it comes to understanding the differences in terms of validity of the PRR vs. the RR AIR estimates, a number of questions may be raised:

- Is PRR less affected by telescoping than RR?
- Is the problem of replicated reading reduced in PRR as compared to RR
- Are we actually moving towards a more issue-dependent measurement, and if so - what are the consequences?

The final question will be:

- Does our PRR model give a more correct measure of AIR than traditional RR even for titles with publication periods of the same length?

The answer to this question is not given. Maybe an AIR estimate based on PRR is less biased than using traditional RR. On the other hand, we know that introducing PRR also for the newspapers with even publication periods will lead to a change of the currency in Norway – in a negative direction. To avoid such a currency change it was decided that AIR calculations for titles with even publication periods should be done using the traditional RR model.

5. Did Pure Recent Reading change the currency?

Having produced stable and reasonable readership numbers in the 1990s, and FRY being recognised in the Norwegian market, we were very excited to see the first test figures. The results from these tests, reported at the EMRO Meeting 2000,²² suggested that the overall figures in switching from FRY to PRR would not disturb the AIR currency accepted by the industry, and would enable us to meet the ever increasing marked demand for more frequent reporting of readership figures.

Based on the results we achieved in our test of the model, it was decided by the Norwegian Newspaper Association to use PRR for establishing the readership figures for non-daily newspapers in our NRS reported on data collected in fall 1999/spring 2000. Even if our test on a smaller sample indicated no drastic changes in overall readership figures, we were quite excited to see the results and the market's reactions.

Taking into account that we had made a rather drastic change of method, the readership figures remained quite stable, with little reaction from the market. This trend seems to remain stable, and the following comparison illustrates the aggregate figures on differences in levels when comparing our latest reported data (collected fall 2000 to spring 2001) for both FRY²³ and PRR.

Table 5.1 shows that data from 30,000 interviews gives a total index of 99 for all of the 149 measured newspapers. Six-day publications also have an average of 99, while newspapers published 2 days a week have an index of 98. We see there is no significant skewness due to number of issues a week.

All indexes are very close to 100, and compared to other methodological comparisons we've seen at the latest Worldwide Readership Symposiums, we are quite satisfied with the results.

Table 5.1 Index of old and new figures. New AIR figures calculated by PRR divided by the old calculation using FRY for 149 newspaper with 10,000 interviews, by number of publications a week.

	Total	6 days	5 days	4 days	3 days	2 days
Index	99	99	101	100	97	98

6. Conclusion and some implications

The introduction of Pure Recent Reading did not change the currency for newspapers in Norway, and compared to other methodological comparison, we are quite pleased. In conclusion, we have met the challenge of uneven publication periods, and we are now prepared to meet the demand for more frequent and detailed reporting of readership figures.

We also believe that Pure Recent Reading – which calculates the number of readers for the actual issue periods, depending on the day of the interview and the day of publishing – better satisfies the strict theoretical assumptions for Recent Reading, which is recognised, but often ignored.

Implications for measuring magazines?

We believe that many countries have met the challenges posed by uneven publication periods for magazines. Not all weeklies are published every week; we often have 51 or 53 publications a year. And not all monthlies are published every month, being that some are published 11 or 13 times a year.²⁴

If Pure Recent Reading is less affected by telescoping than traditional Recent Reading, and if Pure Recent Reading reduces overestimation due to replicated reading compared to traditional Recent Reading, will our Pure Recent Reading model then provide a more accurate measure of AIR than traditional Recent Reading for magazines as well, especially if the publications have uneven issue periods or an irregular publication structure? We're not sure, but we *are* sure that some of you have an opinion on this.

²² Futsæter & Holbæk-Hanssen (2000).

²³ This being AIR figures produced with the latest sets of probabilities for the 'frequency of reading' question generated with the FRY model.

²⁴ It could be argued that a 'monthly' magazine issued only nine or ten times a year should consider whether RR is the right choice, or whether we should adopt some entirely different technique (Brown 1990).

Future perspectives

When the first electronic interview system, CATI, was introduced during the eighties in the Netherlands, one could clearly recognise its major advantages of improved control of sample and interviewing, such as daily national representative sample and interviews distributed evenly across the days of the week.

In the process of developing Pure Recent Reading, we discovered that CATI is able to instruct and quality assure the interviewers and the subsequent processing of data better than traditional personal interviewing and postal surveys, for example with regard to information on each newspaper's issue days and information on which day each interview was conducted as recorded by the CATI system.

In the future, increased distribution of electronically based systems such as CAPI, CAWI and the establishment of panels based on new technology,²⁵ Pure Recent Reading can be applied to areas of applications not yet thought of.

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²⁵ Michael Brown presents an overview of some new techniques in his book from 1999. In Erhard Meier's *What's new in readership research* from 1999 the use of CAPI has spread to three countries. Perhaps the most exiting developments are taking place in Netherlands, where the use of electronic questionnaires on PCs and the Web is seriously being discussed. We are sure that several papers will be presented on new methodological approaches at the Worldwide Readership Symposium 9 in Venice 2001.