

PURE RECENT READING: METHODOLOGICAL EXPERIENCE AND FURTHER DEVELOPMENT

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1. Introduction

Two important questions for Print research are addressed in the call for synopses: What sort of data should the Print medium provide, and how can our existing surveys be used more imaginatively? This paper tries to answer some questions related to these general-challenges.

In the Venice symposium in 2001, we described our new method (PRR) for establishing AIR-figures for Norwegian newspaper (Futsæter & Østnes, 2001). Now – two years later – we are confident that the change from FRY to an (at that point) undocumented method such as PRR was the correct choice, and we would like to document some of the findings that give us this confidence.

Furthermore, as indicated in our Venice paper - “Pure recent reading: The solution for non-daily newspapers?” - the results from PRR raise some questions as to what is actually measured with traditional RR, a method widely used for establishing AIR-figures for magazines. Our NRS covers publications and questions that give us a unique opportunity to evaluate the differences in results between the two methods. In this paper we’d like to focus on some examples using the two different methods (RR and PRR) of calculating AIR, and explain the differences.

New market demands such as competition from TV Meter data, with its detailed overnight reporting, and the Internet, with even faster and more sophisticated data, have put print research under pressure from electronic media and advertising agencies. Moreover, the 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. The demand for more frequent and detailed reporting has resulted in a change from CATI FRY to Pure Recent Reading (PRR) in Norway (Futsæter & Holbæk-Hanssen 2000). PRR calculates the number of readers for the actual issue periods, depending on the day of the interview and the day of publishing, and is able to meet the demand for more frequent and detailed reporting of readership figures.

Even if the readership figures are relatively stable compared to, e.g. TV figures with overnight ratings, they will fluctuate. Based on 30,000 interviews yearly, monthly and even for every weekday, figures for both national and local newspapers will be shown.

Furthermore, recent developments using a model for estimating future readership figures based on measured readership figures emerging from 90,000 interviews during the past three years, will be presented for the first time.

2. Four years with PRR in Norway – experiences and findings

2.1 A short recap

In the 2001 symposium in Florence (Futsæter & Østnes) we described and discussed the method chosen to establish AIR for local newspapers with a limited number of issues a week, when switching from using the FRY method in the Norwegian NRS survey.

One basic assumption for the traditional RR -method is that the publication is exactly regular, with all publication periods being of equal length. In Norway a vast majority of the local newspapers have 2-6 issues a week, and hence are unsuited to be AIR-calculated with RR, as publication periods are uneven.

The method we “invented” – called Pure Recent Reading (PRR) – is applicable for all newspapers covered in our NRS, also those with 2-6 issues a week, as it uses actual issue-periods as input for calculation of AIR-levels. Using this method calls for full knowledge of each newspaper’s issue-days, and 100% sample control. An illustration of the method is described for a two-issues-a-week (Wednesday and Friday) newspaper in figure below:

Figure 2.1 The PRR-model.

		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	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 →

595

AIR level: 595/700 = 85.0%

In our 2001 paper we concluded that the switch from FRY to PRR had no effect on the “currency” for local newspapers in Norway. On the other hand, over the 6 periods of using the PRR-approach for calculating AIR-figures, we have gained some experience that we would like to share with others considering using a corresponding method. Furthermore, we raised some questions in our 2001 paper that we’d like to comment further and hopefully give some probable answers to:

- Does our PRR model give a more correct measure of AIR than traditional RR even for titles with publication periods of the same length?
- Is PRR less affected by telescoping than RR?
- Is the problem of replicated reading reduced in PRR as compared to RR?

2.2 Experiences

During our years using PRR, it has become quite clear that PRR is a quite demanding method when covering a total of about 140 newspapers. There are a number of things that must be monitored, and changes must constantly be made if the results are to be valid. Here we'll point out our main areas of concern:

2.2.1 Sample control and sample balancing

PRR is based on the assumption that the sample is evenly distributed over the seven days of the week for each newspaper measured. This calls for a strictly controlled sample process, in which each day should thus constitute a national representative sample. Even if we strive to achieve this goal (14.3% of the sample on each weekday), there will be some imbalances in our final sample. From the 03/1-report we have the following distribution of our sample (before balancing):

Figure 2.2.1.1 *Distribution of weighted interviews per interview day.*

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
14.2%	14.1%	14.3%	14.3%	14.2%	14.6%	14.3%

Even if the sample balances quite well, we have chosen as a rule to balance the number of weighted interviews per day on top level before performing the PRR-calculations. That way we reduce the effect of irregularities as to the distribution of interviews over weekdays, which could occur.

It's equally important that the geographic distribution be correct on a day-by-day basis. Our 03/1-report shows the following results. These are weighted, but not balanced, figures and - as mentioned earlier - the sample is balanced for weekdays before PRR -calculations are carried out.

Figure 2.2.1.2 *Geographically distribution of sample over days of week.*

		Trade-area			
		East	West	Middle	North
Interview-day	Total	55 %	23 %	13 %	9 %
	Monday	57 %	23 %	12 %	8 %
	Tuesday	55 %	23 %	13 %	9 %
	Wednesday	56 %	23 %	12 %	9 %
	Thursday	57 %	22 %	13 %	9 %
	Friday	55 %	23 %	14 %	8 %
	Saturday	54 %	24 %	14 %	8 %
	Sunday	54 %	24 %	14 %	9 %

2.2.2 Changes on title level

Even with full control over the sample distribution, there are other factors that are essential when calculating AIR with the PRR-method. The most important information is which day(s) of the week each newspaper is issued, which of course has implications on number of days in each issue-period and PRR-calculations. One might think that this is quite static information, but during the years of utilizing the PRR-method in Norway we have experienced that this is not the case. As many as 15% of the newspapers covered in our NRS have had changes affecting PRR-calculations during the period we have used this method. The critical changes on title level are:

- change of number of issues a week and/or
- change of issue days

It is of essential importance that any change in the newspapers issue-frequency is registered in the production system immediately after they have taken place, both so that the interview is conducted properly, and that PRR-calculations are carried out with correct information as to number of issues a week, and issue-days.

2.2.3 Irregularities in the "newspaper-environment"

Furthermore, there are often some irregularities regarding issue-days during e.g. holiday periods. So, even if a newspaper has defined the issue-days to Monday-Wednesday-Friday, this just might not be the case e.g. during the Christmas period. This will affect the number of days in the issue-period for this newspaper during this period.

Other irregularities, such as strikes among newspaper personnel (this has been the case in Norway two successive years) with no newspaper issued as a result, will also affect the PRR-calculations. Even this information must be registered on title level in the production system to be considered when carrying out PRR-calculations.

2.2.4 How to deal with changes and irregularities

To overcome the challenges of changes and irregularities described previously, we have decided to build and maintain a database holding all essential information on each newspaper. This database will contain a calendar-based issue register for each newspaper, showing which of the year's 365 days the newspaper is actually issued in order to define 100% correctly the actual issue -periods for the newspaper in question. An example of such an issue-calendar is shown in this figure:

Figure 2.2.4 Example of an issue-calendar.

ISSUE CALENDAR FOR NEWSPAPER A YEAR 2002								Comment:
	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	
Week 1	0		X	X				New Years Day
Week 2	X		X	X				
Week 3	X		X	X				
Week 4	X		X	X				
Week 5	X		X	X				
Week 6	X		X	X				
Week 7	X		X	X				
Week 8	X		X	X				
Week 9	X		X	X				
Week 10	X		X	X				
Week 11	X		X	X				
Week 12	X		X	X				
Week 13	X		X	0				Easter
Week 14	0		X	X				
Week 15	X		X	X				
Week 16	X		X	X				
Week 17	X		X	X				
Week 18	X		0	X				National holiday
Week 19	X		X	0				Ascension day
Week 20	X		X	X				National holiday
Week 21	0		X	X				National holiday
Week 22	X		X	X				
Week 23	X		X	X				
Week 24	X		X	X				
Week 25	X		X	X				
Week 26	X		X	X				
Week 27	0		0	0				No newspaper issued this week
Week 28	X		X	X				
Week 29	X		X	X				
Week 30	X		X	X				
Week 31	X		X	X				
Week 32	X		X	X				
Week 33	X		X	X				
Week 34	X		X	X				
Week 35	X		X	X				
Week 36	X		X	X				
Week 37	X		X	X				
Week 38	X		X	X				
Week 39	X		X	X				
Week 40	X		X	X				
Week 41	X		X	X				
Week 42	X		X	X				
Week 43	X		X	X				
Week 44	X		X	X				
Week 45	X		X	X				
Week 46	X		X	X				
Week 47	X		X	X				
Week 48	X		X	X				
Week 49	X		X	X				
Week 50	X		X	X				
Week 51	X		X	X				
Week 52	X		0	0				Christmas

The main challenge with this approach is probably not that of building an information database, but that of keeping this database up-to-date with all the necessary information from the 140 newspapers covered in our National Readership Survey. This calls for a smooth information flow from the newspapers measured to our production database. To obtain this we have established close connections with the Norwegian Media Businesses' Association (formerly The Norwegian Newspaper Publishers' Association), which collects and maintains information about all local newspapers in Norway. We'll obtain access to their database regarding all their member newspapers for use in our NRS production system. This production database is under development and planned to be implemented in 2004/2005, adding even more control to our production process.

2.3 PRR vs. traditional RR – what's the difference?

One of the questions raised, but not answered, in our paper two years ago was "Does our PRR model give a more correct measure of AIR than traditional RR even for titles with publication periods of the same length?"

As stated in our 2001 paper, we do not use PRR when establishing AIR-estimates for publications with even issue-periods. This was a pragmatic decision taken to avoid "currency changes" for the newspapers in question. Even if not using PRR to determine the official AIR-figures for these newspapers, we have the necessary data to test this method against traditional RR, to see if there is any knowledge to be derived from differences in AIR-estimates between the two approaches.

The following figure from our 2001 paper describes the “PRR -effect” for a Saturday newspaper:

Figure 2.3.1 The “PRR-effect”.

		RR-claim								
		Total	Yester-day	2 days ago	3 days ago	4 days ago	5 days ago	6 days ago	7 days ago	Longer ago
Interview-day	Total	700	38	40	40	41	39	39	44	331
	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

RR-CALCULATION:

RR-claims: $(38+40+40+41+39+39+44)=281$

*AIR-calculation: $(281/700)*100=40\%$*

PRR-CALCULATION:

PRR-claims $(1+39+1+40+41+38+39+40+37)=276$

*AIR-calculation: $(276/700)*100=39\%$*

THE PRR-EFFECT:

*$(281-276)/700*100=1\%$*

The PRR-effect is here defined as the number/percentage of readers “lost” when using actual issue-period instead of average issue-period when calculating AIR, i.e. the respondents qualifying to be AIR-counted using RR and not qualifying to be AIR-counted using PRR.

Amongst the covered publications in our NRS we have a number of newspapers issued once a week. We have chosen to take a closer look at the “PRR-effect” for the national one-day newspapers in our survey:

- Aftenposten Saturday - national Saturday newspaper (subscription)
- Aftenposten Sunday - national Sunday newspaper (subscription)
- Dagbladet Saturday - national Saturday newspaper (single copy sale)
- Dagbladet Sunday - national Sunday newspaper (single copy sale)
- Magasinet - Saturday supplement to Dagbladet (single copy sale)
- VG Saturday - national Saturday newspaper (single copy sale)
- VG Sunday - national Sunday newspaper (single copy sale)

When isolating the “PRR-effect” regarding respondents from our 03/1-report for these publications, we find the following basic information:

Figure 2.3.2 PRR-effect from NRS 03/1.

		PRR-effect							Net Total PRR-effect
	Total	Aftenposten Saturday	Aftenposten Sunday	Dagbladet Saturday	Dagbladet Sunday	Magasinet	VG Saturday	VG Sunday	
Projected total	3733,098	5,718	6,909	10,192	7,347	10,23	10,371	12,236	56,055
Sample	29866	39	47	81	56	74	81	89	417

As one can see, the PRR-effect for these publications individually is relatively small, both in absolute figures and as a percentage of reported readership figures:

- Aftenposten Saturday – $(5,718 / 733,066) * 100 = 0.8\%$
- Aftenposten Sunday – $(6,909 / 568,717) * 100 = 1.2\%$
- Dagbladet Saturday – $(10,192 / 1,144,750) * 100 = 0.9\%$
- Dagbladet Sunday – $(7,347 / 582,522) * 100 = 1.3\%$
- Magasinet – $(10,230 / 972,003) * 100 = 1.1\%$
- VG Saturday – $(10,371 / 1,581,576) * 100 = 0.7\%$
- VG Sunday – $(12,236 / 981,837) * 100 = 1.3\%$

Even with a small sample for each newspaper's PRR-effect, we have analysed the data to see if we can find some characteristics to these respondents. Searching for characteristics in the demographic information gave us no consistent patterns as to whether these respondents differ from the sample average. Some indications for the total PRR-effect group (417 respondents) are, however:

- There seems to be a significant overweight of men for the group as a whole.
- The group as a whole watches significantly more TV channel NRK 2 than does the sample average.

2.3.1 RR overestimation - Telescoping and/or RQP-effect?

It's not possible to draw any conclusions from the demographic analysis, so we carried on analysing these respondents against their answers to the corresponding questions about reading (Frequency of reading and Recency of reading), and we found the following regarding the RR-question:

Figure 2.3.1.1 Distribution of PRR-effect respondents on corresponding Recency of reading question.

	PRR-effect vs. corresponding recency question						
	Aftenposten Saturday	Aftenposten Sunday	Dagbladet Saturday	Dagbladet Sunday	Magasinet	VG Saturday	VG Sunday
Yesterday	0,0	0,0	0,0	0,0	0,0	0,0	0,0
2 days ago	0,0	3,0	1,9	5,6	7,3	7,4	1,4
3 days ago	0,0	3,8	3,5	1,6	6,9	6,0	4,7
4 days ago	1,7	6,4	2,6	1,5	7,5	5,2	5,5
5 days ago	4,9	10,6	2,0	8,9	1,6	0,0	10,0
6 days ago	14,3	9,3	10,9	14,7	6,9	13,3	9,1
7 days ago	79,1	67,0	79,0	67,7	69,8	68,1	69,2

Even with our limited sample, it appears that a disproportionately high share of the respective newspapers "PRR-effect" respondents falls into the group "7 days ago" on the RR-question. In order to verify whether this proportion, varying from 67.0% to 79.1%, is higher than what could be expected, we calculated expected values for each of the categories from the recency question, based on the assumption of random distribution from the matrix below (exemplified with a Saturday newspaper and 60 "PRR-effect" respondents distributed equally per day).

Figure 2.3.3.1.2 Expected distribution of PRR-effect respondents.

	Total	Y	2d ago	3D ago	4d ago	5d ago	6d ago	7d ago
Total	60,0	0,0	1,7	3,7	6,2	9,5	14,5	24,5
M	10,0			2,0	2,0	2,0	2,0	2,0
T	10,0				2,5	2,5	2,5	2,5
W	10,0					3,3	3,3	3,3
T	10,0						5,0	5,0
F	10,0							10,0
S								
S	10,0		1,7	1,7	1,7	1,7	1,7	1,7

Distributed randomly:

- 1.7/60 or **2.8%** should go into the group “2 days ago”
- 3.7/60 or **6.1%** should go into the group “3 days ago”
- 6.2/60 or **10.3%** should go into the group “4 days ago”
- 9.5/60 or **15.8%** should go into the group “5 days ago”
- 14.5/60 or **24.2%** should go into the group “6 days ago”
- 24.5/60 or **40.8%** should go into the group “7 days ago”

When looking at the our results again, this time with the expected distribution added, we can see that there's a big difference between expected an observed distribution in the “7 days ago” group for all our publications. Why is it that these respondents (even if few, but with a consistent pattern) have a tendency to answer “Read last time - 7 days ago” much more frequently than one could expect?

Figure 2.3.3.1.3 Real vs. expected distribution of PRR-effect respondents.

	PRR-effect vs. corresponding recency question							Expected distribution
	Aftenposten Saturday	Aftenposten Sunday	Dagbladet Saturday	Dagbladet Sunday	Magasinet	VG Saturday	VG Sunday	
Yesterday	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
2 days ago	0,0	3,0	1,9	5,6	7,3	7,4	1,4	2,8
3 days ago	0,0	3,8	3,5	1,6	6,9	6,0	4,7	6,1
4 days ago	1,7	6,4	2,6	1,5	7,5	5,2	5,5	10,3
5 days ago	4,9	10,6	2,0	8,9	1,6	0,0	10,0	15,8
6 days ago	14,3	9,3	10,9	14,7	6,9	13,3	9,1	24,2
7 days ago	79,1	67,0	79,0	67,7	69,8	68,1	69,2	40,8

With a sufficient sample we could have moved even further, checking if there are any differences in distribution between the days where the interviews were conducted (distance in time from the last issue), but the sample even for the largest “PRR-effect” (VG Sunday – 89) is considered too small for such an exercise.

In any case, there should be reason to believe that this unexpected distribution among the PRR -effect respondents could be a result of the phenomenon known as “Telescoping,” which is a known bias inflating the AIR-estimates using the traditional RR-technique.

A more likely description of this phenomenon from our point of view is that this is a result of a *deliberate rationalising of the respondents' answer to the RR question, as a result of the response alternatives offered*. This may again be related both to telescoping, and to the well-documented theory about “RQP -effect,” which suggests that readership estimates are positively correlated with RQP¹

Consider the following example:

- * Newspaper X – issued once a week on Saturday
- * Interview is conducted on Monday
- * Respondent actually read Newspaper X nine days ago (Saturday – when issued last time)

When the respondent is asked when he last read Newspaper A, he is in our survey presented with the following response alternatives giving a RQP of $7/(7+1)=0.875$ for newspaper X.

- Yesterday
- 2 days ago (Newspaper X last issued)
- 3 days ago
- 4 days ago
- 5 days ago
- 6 days ago
- 7 days ago
- Longer ago

¹ Brown, Michael “The dependence of ‘Recent Reading’ estimates on question structure: A cognitive analysis” WRRS 9 – Florence 1999

The correct answer would of course be “Longer ago,” but the respondent is likely to regard the choice “Longer ago” as an indefinite period, quite far from the answer he’d really want to give (i.e. “Nine days ago”) and chooses an alternative answer which probably is considered much closer – that is, “7 days ago.”

Even though this effect (of overestimating AIR in normal RR-calculation) is relatively small, inflating the readership figures by 0.7%-1.3% in our case, one might be able to reduce/eliminate it by reformulating the response alternatives for the RR-question (read: Reduce RQP). In our case of weeklies, one solution is to extend the list of response alternatives in the following way:

- Yesterday
- 2 days ago
- 3 days ago
- 4 days ago
- 5 days ago
- 6 days ago
- 7 days ago
- **8-14 days ago**
- Longer ago

... which yields a new RQP of $7/(7+2)=0.778$ for a weekly publication. Following our argument, this would bring the AIR estimate calculated the traditional RR -way closer to what we achieve using PRR-calculations.

We’re not saying there is a general rule stating that reducing RQP would give more accurate readership estimates. We’re simply suggesting that the main difference between calculating AIR-estimates using traditional RR and PRR is that PRR is less affected by the design and number of response alternatives in the RR-question, and yields AIR -estimates unaffected by RQP and telescoping.

2.3.2 “PRR-effect” respondents and frequency of reading

Figure 2.3.2.1 *Distribution of PRR-effect respondents on corresponding Frequency of reading question.*

	Distribution of PRR-/PRR-effect respondents vs corresponding frequency-question													
	Aftenposten Saturday		Aftenposten Sunday		Dagbladet Saturday		Dagbladet Sunday		Magasinet		VG Saturday		VG Sunday	
	PRR	PRR-effect	PRR	PRR-effect	PRR	PRR-effect	PRR	PRR-effect	PRR	PRR-effect	PRR	PRR-effect	PRR	PRR-effect
1 out of 6 last issues	5	5	4	0	10	9	13	2	8	7	7	14	9	11
2 out of 6 last issues	5	8	3	7	11	11	13	14	10	12	10	22	10	8
3 out of 6 last issues	5	10	4	4	13	13	14	9	12	11	12	13	12	6
4 out of 6 last issues	4	2	3	3	9	6	9	6	9	9	9	5	9	9
5 out of 6 last issues	3	6	3	5	7	3	6	3	7	5	7	2	6	4
6 out of 6 last issues	78	44	80	60	49	24	41	30	52	18	53	17	51	27
0 out of 6 last issues	2	24	3	22	2	36	4	38	2	38	2	26	3	35

The respondents “dropping out” using PRR instead of RR-calculations due to the PRR-effect, show a quite different loyalty to the newspaper compared to the ones qualifying as AIR -readers using the PRR-method. The differences are most obvious in the groups “0 out of 6 last issues” and “6 out of 6 last issues.”

Indexing the figures the following way:

- “1 out of 6 last issues” = 2
- “2 out of 6 last issues” = 3
- “3 out of 6 last issues” = 4
- “4 out of 6 last issues” = 5
- “5 out of 6 last issues” = 6
- “6 out of 6 last issues” = 7
- “0 out of 6 last issues” = 1

...would give the following table of Loyalty indices for the two respondent groups per newspaper:

Figure 2.3.2.2 Loyalty-indices.

	Aftenposten Saturday		Aftenposten Sunday		Dagbladet Saturday		Dagbladet Sunday		Magasinet		VG Saturday		VG Sunday	
	PRR	PRR-effect	PRR	PRR-effect	PRR	PRR-effect	PRR	PRR-effect	PRR	PRR-effect	PRR	PRR-effect	PRR	PRR-effect
Loyalty-index	6,2	4,6	6,3	5,2	5,3	3,5	5,0	3,7	5,4	3,3	5,5	3,3	5,4	3,7

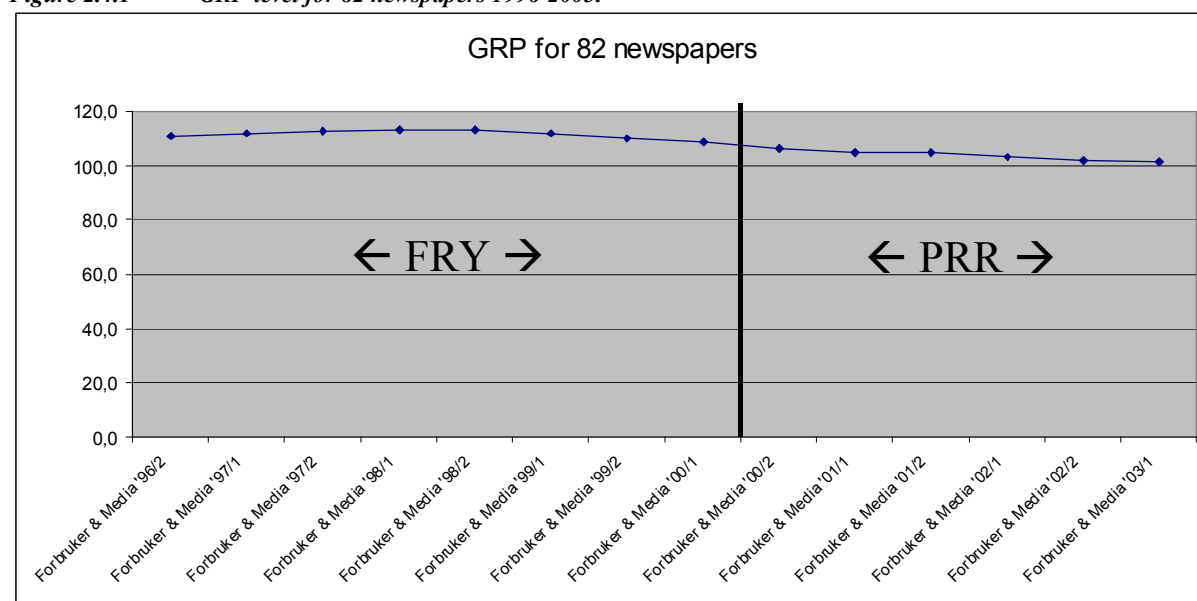
The obvious pattern is that the respondents disqualified to contribute to the AIR-estimate by using PRR instead of RR have a significantly lower loyalty to the newspaper, measured by the frequency-of-reading question.

Thus it seems that overestimations of the AIR-figure as described previously is more likely to occur among irregular readers than among highly regular readers.²

2.4 The overall performance of PRR – any unexplainable shifts in AIR-figures?

One of the conclusions we drew in our 2001 paper based on the available figures at that time, was that the introduction of PRR as the official method of AIR calculation did not change the currency in the Norwegian newspaper market. Now – two years later – we have had another look at the data to see if this conclusion is still valid.

Drawing a GRP line for a sample of the newspapers that are “stable” (i.e. number of issues a week, and issue-days unchanged) over a period from 1996 to 2003, we find that the introduction of PRR has apparently not yielded any shift for the overall readership level.

Figure 2.4.1 GRP-level for 82 newspapers 1996-2003.

The actual change of method took place for the reporting of our NRS in fall 2000, and from previous report (00/1) the total GRP for the 82 newspapers fell from 108.7 to 106.4 (or down 2.1%). Even if this is the biggest change we see from one report to the next in this time frame, it cannot be considered a currency change for the local newspapers, but rather a “next step” in the already existing trend in the reading of local newspapers in Norway.

Taking a look at the individual changes, we find that the changes were:

More than + 10%	1 newspaper
+ 1-10%	25 newspapers
0% (unchanged)	4 newspapers
- 1-10%	45 newspapers
More than -10%	7 newspapers

² For example, mentioned in: Carpenter, Ron “Recent reading – an exercise in double-counting” WRRS 9 – Florence 1999

In an effort to further verify that these changes reflect real changes in the reading of Norwegian newspapers, we “froze” the reading probabilities between the 00/1 and 00/2 report and calculated AIR based solely on the respondents’ distribution on the frequency-of-reading question. Doing this, we will produce AIR -figures not disturbed by any change in method, but only dependent on number of respondents qualifying for the frequency question (i.e. Yes – read last 12 months), and the respondents’ distribution on this question (i.e. Loyalty).

Doing this, we also experienced a negative change in the total GRP for the 82 newspapers between the 00/1 and the 00/2 report. The change with fixed probabilities was –1.4%, compared to the –2.1% we saw in the method-change case. Summing up the individual changes in this case we find the following:

More than + 10%	1 newspaper
+ 1-10%	32 newspapers
0% (unchanged)	7 newspapers
- 1-10%	37 newspapers
More than –10%	5 newspapers

Based on these figures, we can say that the change of method didn’t change the currency for Norwegian newspapers, and that using fixed probabilities (as we did in this experiment) would produce results in the same direction as PRR, though probably somewhat delayed.

From the more subjective side, our feeling is that after we changed our method for establishing AIR, the number of critical questions as to the reported results have decreased in number. Together with our findings analysing the results presented in this paper, this gives us reason to believe that introducing the PRR method was the correct choice for the Norwegian NRS.

3. More frequent and detailed reporting of readership figures

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.

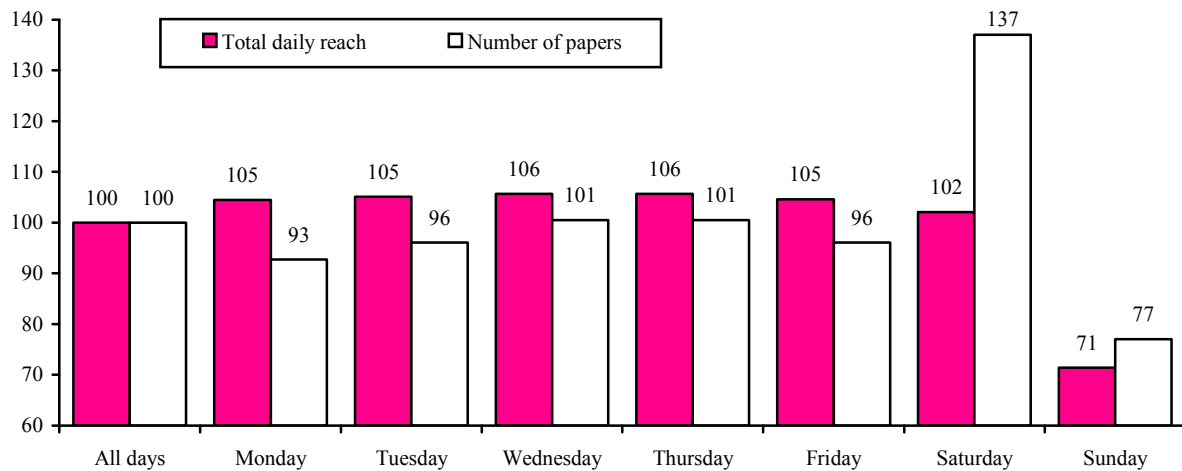
The NRS has some advantages due to more frequent and detailed reporting:

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

Daily fluctuations

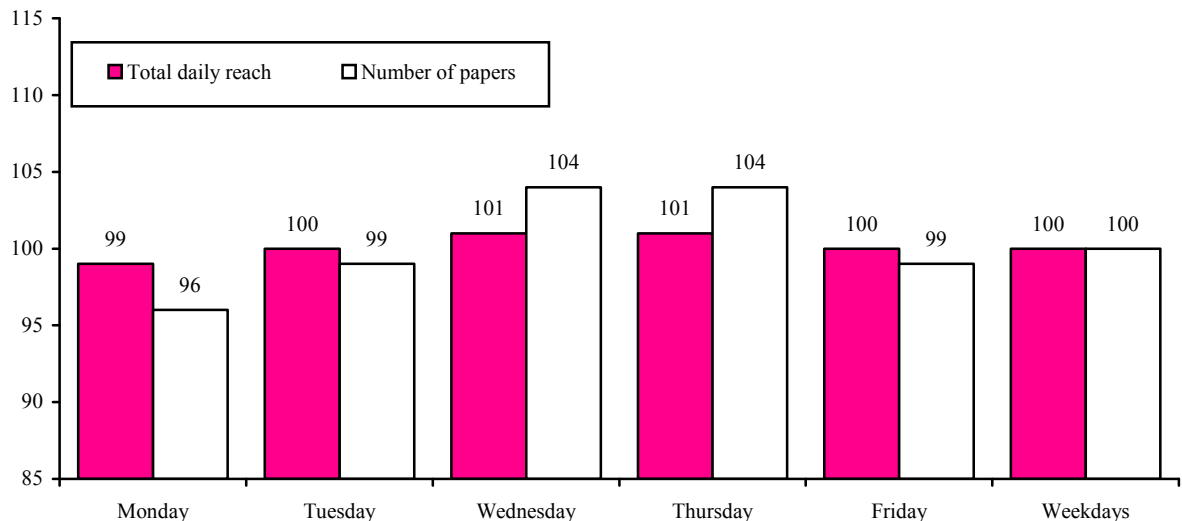
We’ll start by presenting the indexes daily fluctuations for total daily reach (at least read one newspaper) and number of newspaper read daily. The indexes are calculated by dividing the claimed yesterday level for a day by the average for all days. The total daily reach index varied by 35 points: from 71% on Sundays to 106% on Wednesdays and Thursdays. The number of papers read index per day varied by 60 points: from 77% on Sundays to 137% on Saturdays. The Sunday figures are low because only very few papers are published on Sunday. We will therefore go over to studying the fluctuations from Monday to Friday.

Figure 3.1 Daily fluctuations for total daily reach and number of newspapers. Percentage. The indexes are calculated by dividing the claimed yesterday level for a day by the average for all days.



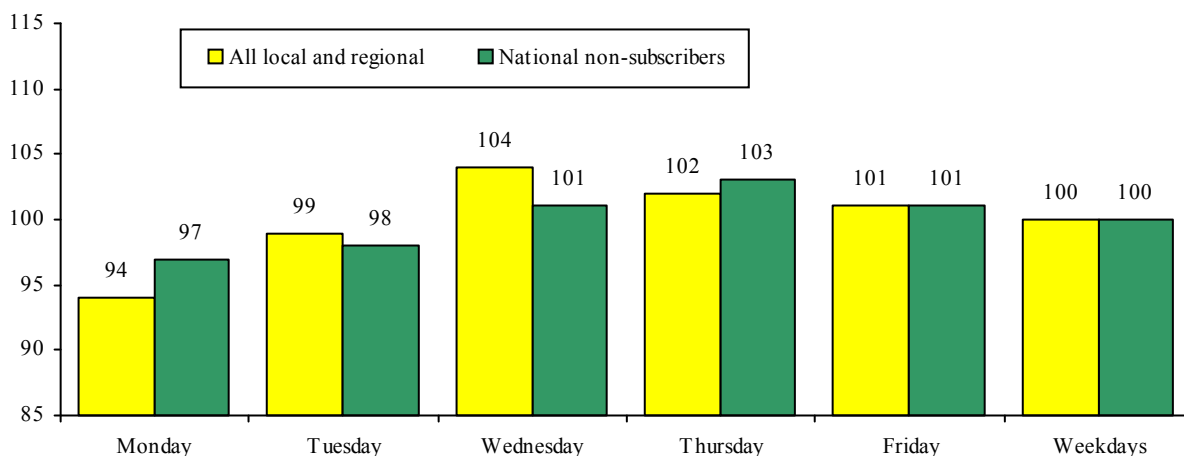
During the weekdays (Monday-Friday) the total daily reach index varied only 2 points. The number of papers index varied by 8 points: from 96% on Mondays to 104% on Wednesdays and Thursdays.

Figure 3.2 Daily fluctuations for total daily reach and number of newspapers. Percentage. The indexes are calculated by dividing the claimed yesterday level for a day by the average for all weekdays.



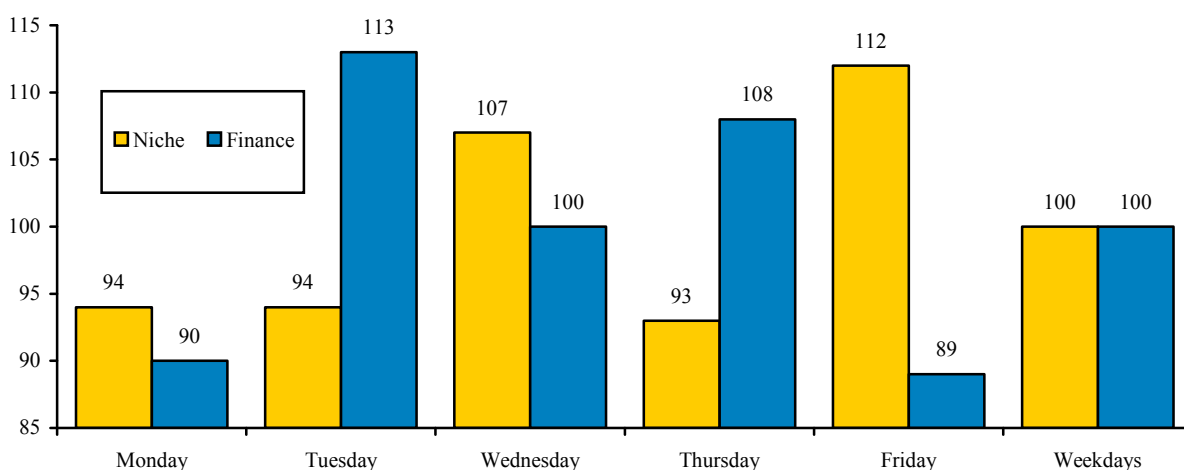
The national non-subscribers (VG/Dagbladet) index varied by 6 points: from 97% on Mondays to 103% on Thursdays. The average for all local and regional papers index varied by 10 points: from 94% on Mondays to 104% on Wednesdays.

Figure 3.3 Daily fluctuations for all locals and regionals and national non-subscribers. Percentage. The indexes are calculated by dividing the claimed yesterday level for a day by the average for all weekdays.



The group of niche papers index varied by 19 points: from 93% on Thursdays to 112% on Fridays. The finance papers (Dagens Næringsliv/Finansavisen) index varied by 24 points: from 89% on Fridays to 113% on Tuesdays.

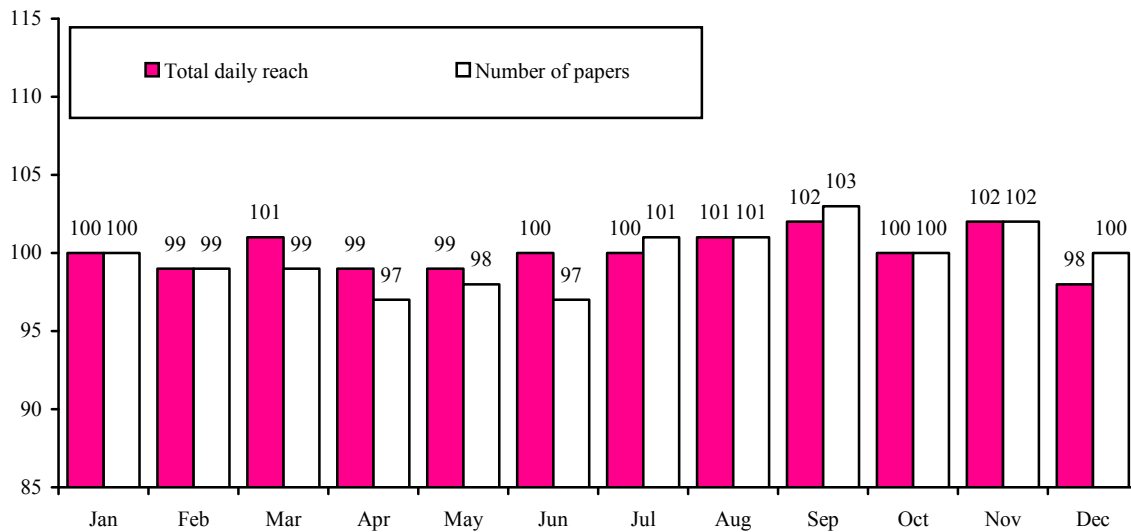
Figure 3.4 Daily fluctuations for niche papers and finance papers. Percentage. The indexes are calculated by dividing the claimed yesterday level for a day by the average for all weekdays.



Monthly fluctuations

The total daily reach index varied by 4 points: from 98% in December to 102% in September and November. The number of papers read per day index varied by 6 points: from 97% in April and June to 103% in September.

Figure 3.5 Monthly fluctuations for total daily reach and number of newspapers. Percentage. The indices are calculated by dividing the claimed yesterday level for a day by the average for all weekdays.



What did we learn?

The finance papers have the largest daily fluctuations, followed by the niches, locals and regionals. The finance papers also have the largest seasonal fluctuations, followed by the niches and national non-subscribers. Overall the finance papers have the largest fluctuations, followed by the niches. Surprisingly, the national non-subscribers do not have such great daily fluctuations, but the seasonal fluctuations are significant. The locals and regionals overall have the least fluctuations. This can be explained by the fact that these have regular readers who pick up their papers on their doorstep every day.

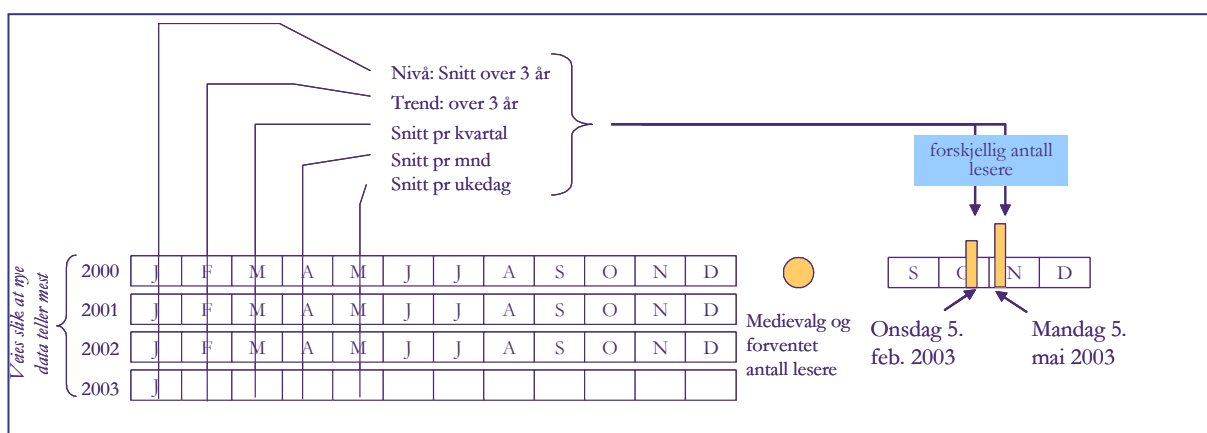
Many of the fluctuations can be explained on the basis of which days the papers are normally published. Since many papers do not have Sunday editions, there are fewer readers on Sundays. Some locals are just published 2-4 weekdays. The next step will therefore be to check these fluctuations against publication days for each paper. The Norwegian NRS contains such detailed information.

4. Simulation of readership figures

The Newspaper tender for 2004-2006 states the following success criteria:

- “The media index will contain a new and better forecast model. The new model will produce estimates based on more up-to-date data than today. It is preferable that the estimates be weekday and season related.”

The following outline of a new forecast model is explained in the tender:



The aim is that, "with the aid of the new forecast model, a user should be able to produce a more exact OTS estimate (Opportunity To See) for an ad on a chosen future date." According to the tender document, the new forecast model will take the following into account:

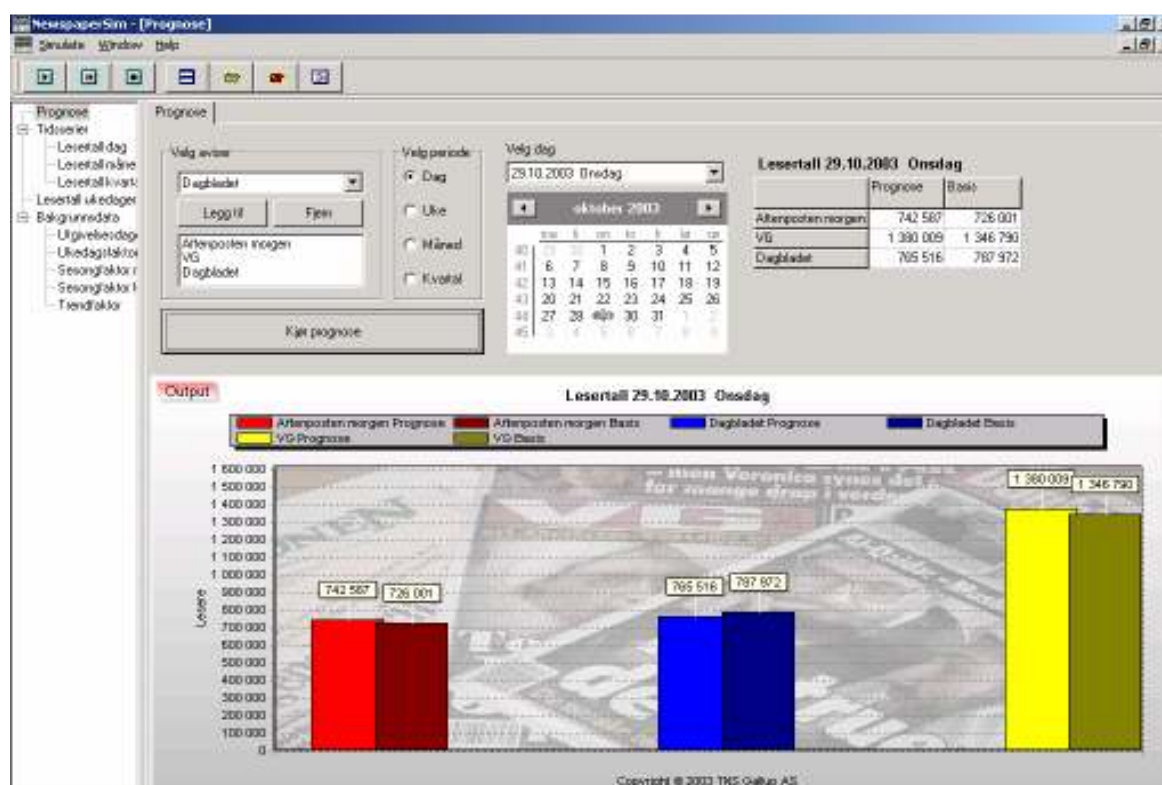
- **Trend:** The underlying trend in readership over time (e.g. the past three years)
- **Season:** Systematic fluctuations throughout the year
- **Varying national holidays:** Must adjust for varying national holidays and similar, varying, periods
- **Weekday:** It must be possible to create forecasts for individual days (e.g. Norway's Constitution Day – 17 May)

NewspaperSim

Based on these provisions, TNS Gallup has developed the first generation of the simulation tool: NewspaperSim. The purpose of NewspaperSim 1.0 is to calculate future readership figures by projecting a basic, historically official, readership figure corrected for day, week, season and development factors. The system should be able to provide answers to future readership figures according to the following criteria:

- Weekday
- Week
- Month
- Quarter

Version 1.0 provides forecasts for year 2003, and will generate forecasts for 19 newspapers and one syndicated service. The engine for calculating future readership figures is not yet ready tested and quality checked, but the results so far are promising. Below, we have simulated how many readers the three biggest newspapers in Norway will have Wednesday, 29 October 2003 under given conditions. The aim of NewspaperSim is to provide specific readership forecasts in a given week, month, quarter, weekday and even on a particular date. Since we haven't tried out and analysed the result yet, we cannot at this point answer how satisfied we are with the forecasting.



A typical use will be to select a newspaper from the newspaper-list box. Then, using the radio buttons, select a period (day, week, etc.) for the desired forecast. The logic is then further steered by the calendar object. We can outline the following logic for various period selections

From the list of newspapers and syndicated services, you can select newspapers to add to the list to the right. These alternatives will then be presented in all graphs and tables throughout the programme.

5. Further perspectives

In conclusion, the introduction of Pure Recent Reading did not change the currency for newspapers in Norway, and using fixed probabilities would produce results in the same direction as PRR, though probably somewhat delayed. 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.

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

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. In chapter three we presented the first figures on an aggregate level for different newspaper groups. The daily and monthly fluctuations can be explained by the readers' needs, interests and available time to read different papers from day to day and during the course of the season. This could provide useful information to the newspaper publishers for editorial product development and strategic decision-making.

Furthermore, the media agencies will require more knowledge about readership fluctuations to improve media planning.

The number of interviews varies greatly, from the national papers (30,000 interviews) to the smallest locals (400 interviews) during the course of 12 months, hence there will be variable possibilities for reporting the different papers on a daily and seasonal basis. Consequently, we have started analysing individual newspapers in order to document whether the fluctuations are random or significant. When this work is completed, policy decisions must be made as to what margins of error are acceptable for the various newspaper groups.

These experiences will also enable the development of simulation models for forecasting daily and seasonal readership figures. We therefore hope to return and discuss experiences and challenges relating to both more frequent and more detailed reporting, and not least of all our ambitious goal of being able to forecast readership figures for a given date in the future.

References

- Brown, Michael 1990: *Dear Reader. Some readership measurement questions ... and some answers.*
Published by RSL and BMRP.
- Brown, Michael 1999: *Effective print media measurement: audiences ... and more.* Published by Ipsos-RSL Limited.
- Brown, Michael 1999: *The dependence of 'Recent Reading' estimates on question structure: A cognitive analysis*"
Worldwide Readership Research Symposium in Venice 2001.
- Carpenter, Ron 1999: *Recent Reading – an exercise in double counting?*
Worldwide Readership Symposium 9. Florence 1999
- Futsæter, Knut-Arne & Helge Holbæk-Hanssen 2000: *From FRY to Recent Reading: Newspaper measurement in Norway.*
EMRO Meeting 2000. Sorrento. Italy. See www.tns-gallup.no
- Futsæter, Knut-Arne & Tore Østnes 2001: *Pure Recent Reading: The solution for low frequent newspapers?*
Worldwide Readership Research Symposium in Venice 2001.
- Futsæter, Knut-Arne 2003: *Daily and seasonal fluctuations in readership levels.*
EMRO meeting 2003, Kuopio, Finland. See www.tns-gallup.no
- Meier, Erhard 2001: *What's been happening and what's new – twenty years of looking at readership research.*
Worldwide Readership Research Symposium in Venice 2001.
- Worldwide Readership Symposium VII. Berlin 1995. Session papers.
- Worldwide Readership Symposium 8. Vancouver 1997. Session papers.
- Worldwide Readership Symposium 9. Florence 1999. Session papers.
- Worldwide Readership Symposium 10. Venice 2001. Session papers.

