THE TRUE AND TOTAL LEVELS OF PRINT READERSHIP – THE 4 STREAMS OF PRINT READERSHIP

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Total reach seem to be the flavor of the month amongst the publishing houses. This might not be so surprising given the development of readership, circulation and ad revenue amongst print media.

To fully understand the new print environment media research needs to measure all distribution channels in the publishing house and furthermore the data streams have to be able to be analyzed together.

In Sweden the www has been measured alongside and then integrated into the NRS since the early 2000: s. This means that we have an outstanding timeline of the rise of digital media and the fall of analogue media. We are able to follow these changes on a target group level over time.

In the winter of 2013 mobile and app readership has been added as new data streams to measure readership.

New channels however challenge not only the publishing house business models but also our traditional way of measuring media and buying and selling media.

The purpose of this paper is to:

- Present the hybrid measurement system of print readership (4 different readership streams presented alongside each other and in total).
- Present the integration techniques used to bring the 4 data streams together.
- Present the different compositions of readership of today.
- Answer the question on the fall of print. Are total readership levels really falling or are the platforms just changing the composition of total readership.
- See how well total print is faring against other media from a cross media perspective how can media research help publishing houses to create multimedia sales packages and help publishing house to stop the analogue dollar drainage?

So can the feelings of analogue doom turn into cross media gloom?

1. The measuring of the 4 data streams of print

Orvesto Digtal combines a low tech large sample TGI/NRS survey with a high tech user centric panel measurement and a site centric traffic measurement system.

• Internet

The hybrid measurement combines a site centric traffic measurement and a recruited panel of persons whose internet usage is tracked in the site centric measurement. The panel members tag their devices used for internet, their panel-id's (cookie based) are then tracked and reported for the Internet sites being part of the site centric measurement. No software installation is needed. Hence also daytime at work Internet usage can be accounted for.



The CAWI recruitment interview is e-mailed to potential panel members. Here relevant demographics and information of devices used for Internet is collected, both their private behavior and their work behavior.

Today around 50 % of the Internet panel is selected from former respondents of Orvesto Consumer and 50 % is randomly recruited from the Orvesto Day Panel.

Examples of questions are number of computers the respondents are using, different web browsers and usage of different devices to access internet such different computers, tablet or a smartphone. At the end of the interview, the tagging process starts, emails are being sent and the panel member is loaded to the database.

To avoid reporting of Internet usage from other users than the panel member, a start page is installed on multi user computers. This start page is launched any time a browser is opened, the user should indicate whether he/she is a member of the panel or not, and is then redirected to the original start page.



As soon as the panel member approved the panel-id on all the devices used to access the internet, the panel member is activated in the panel.

The site owner must implement TNS-SIFOs tags on all the sites and sections to be able to monitor the panels' online behavior. The only major disadvantage of the method is obviously then that only sites that have been tagged by their owner will be measured.

Today the active www panel consists of 18 000 panelists.

• Mobile Internet

To implement the panel-id on smartphones an e-mail is sent out the panel member. In the e-mail we link the panel member to a TNS-SIFO webpage which will set the panel id/identify actual cookie. TNS-SIFO is cooperating with Mobiletech on the mobile measurement since Mobiletech own full access to the mobile network provider data (for example encrypted mobile numbers) this makes the model even more exact than the cookie alone technology used in the internet measurement.

As in the www measurement the media owner must implement TNS-SIFOs specially developed mobile tags on all the mobile sites and sections to be able to monitor the panel and its movement.

Today the active sub mobile panel consists of approximately 50 % of the www panelists.

• Applications

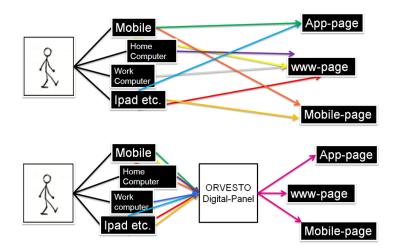
To be able to measure mobile-app activity TNS-SIFO have developed a mobile-app which the panelists download on their smartphones / Ipads etc. The media owners implement a framework in their mobile-apps which allows the TNS-SIFO app to read and monitor the activity on the media owner's apps.

Today the active sub application panel consists of approximately $25\ \%$ of the mobile panelists.

Measured sites:

The panel members' behavior is monitored on the private computer/work computer, smartphone and tablet. All in one Orvesto Digital measure:

- 470 webpages/networks/sub-sites
- 10 WebTV Channels
- 79 mobile pages/apps



• Daily measurement of print media

Orvesto Day is a daily survey of newspaper reading. A thousand daily web interviews are performed 365 days a year. Every respondent gets to answer their reading behavior for the three most recent days.

The total panel-size is 50 000 divided into 22 subpanels. The media agencies and daily press publishers access the data on www.orvestodag.se, where they can analyze daily reach and seasonality reach on basic demographic breakdowns (sex, age and region).

To get day type reach variations into the target group and media planning tool Sesame, a calibration is made to the daily reach levels from Orvesto Day to Orvesto Consumer. This way a bridge is created to all the target group and media data from Orvesto Consumer.

2. Integrating the data streams

In order for Publishers to use these data streams fully it is necessary to integrate them into one analysis base.

The base survey in this case is Orvesto Consumer with its large scale random sample and high response rate, containing the print 'currency' and TGI data.

• Integrating Longitudinal Print data from Orvesto Day

Orvesto Consumer provides a measure of average issue reach which is the 'currency'. AIR provides an average day in the week measure but in order to link to the longitudinal Web and mobile panel data we need to incorporate the day by day readership results provided by the Orvesto Day survey.

From the Orvesto Day survey an average day reach is created for each day of the week over the same (13 week) period of fieldwork as Orvesto Consumer. So for each title Monday reach, Tuesday reach etc. is known for the total population and interlaced subgroups of age within gender within region.

In Orvesto Consumer seven 'new' titles of each publication are created (one for each day of the week) and readers are allocated from those who claimed to read in the last week to each issue day of the week in accordance to their reading frequency claim.

Thus those with an everyday claim will be allocated to all days, and those with a claim of one day in the week will be randomly assigned to one day, and so on.

At the same time the *relative* levels of reach each day are controlled to those found in Orvesto Day so that the average (AIR) day (the currency level in Orvesto Consumer) remains unchanged. This calibration is done within 32 control cells (age within gender within region).

Not only do we have to keep the AIR levels constant we also have to keep the reach accumulation from multiple insertions in line with the binomial expansion model used by Orvesto Consumer for schedule evaluation.

Consequently the week (7 insertions) reach was set by the binomial model and not by the weekly reach claim from the Orvesto frequency scale. In the case where the binomial expansion produced a higher reach (the norm) we would bring into the week 'pool' some readers of lower than weekly frequency and if it produced a lower level we would randomly reject some within the week readers.

Thus we calibrate the week reach as well as the day by day reach. Longer term reach levels (beyond 7 insertions) are also controlled to the binomial expansion model within the software (Sesame) that provides longer term schedule evaluation. Thus we have integrated day by day data for dailies in Orvesto Consumer without disturbing the 'currency' levels (AIR) and schedule reach accumulation results of Orvesto Consumer.

• Integrating WWW, Mobile and Apps

The process to integrate the Orvesto Web and Mobile panel data into Orvesto Consumer is similar but more extended involving the creation of a Virtual Diaryⁱ (VDiary¹). The integration is done separately for Web panel respondents and for each of the sub- sites of a site.

The Internet panel respondents were recruited 50% from previous interviewees of the Orvesto Survey over the last 18-24 months and 50% from the Orvesto Day Panel. Even had we been able to recruit the entire Web sample from Orvesto Consumer where we know all their media, demographic, product behaviour and attitudinal data this information is out of date and would not match with the current Orvesto release.

It was therefore necessary to integrate each period of Internet results into the current Orvesto Consumer release. For reasons of data stability it was decided to release Internet results for an average week of four weeks for each month making 12 Internet data releases within Orvesto Consumer over the year. The panel data is not released separately *making the integrated data in Orvesto Consumer the Internet 'currency'*.

Most important is that Orvesto Consumer is the 'Establishment' survey and the calibration process we use for the data integration has the effect of re-weighting the Internet results to this Establishment survey structure.

Virtual Diary creation

The integration was achieved by creating a 'Virtual' one (average) week Diary for each Orvesto Consumer respondent such that the site visiting claims, when accumulated for all (weighted) informants yield the reach results for each site by hour, broad day part, day and week as reported by the Internet panel control data (for that period).

This is the case for both *Net Reach and Gross Reach (Page Views*). The panel Page Views that we integrate have already been calibrated to the site centric results for each site (page views being the 'currency' for buying).

¹ VDiary © Bucknull & Masson/Sesame Systems Ltd.

This matching to the 'control' data is known as the calibration. Control statistics were set up for 13 population cells determined to differentiate levels of Internet browsing behaviour. The integration has the added benefit of re-weighting the results of the panel to match the 'Establishment' data represented by Orvesto Consumer. The population cells used were as follows:

Table 2	Internet	Internet access							
Work	Hours per week	Home & work	Home not work	Work not home					
Full time	under 2	1	2	3					
	2+	4	5	6					
PT/student	under 2	7	8						
	2+	10	11	9					
Not	under 2	12							
working	2+	13	_						

The degree to which we are able to match the control cell data in the calibration is very high and can be seen in Table 3 below which reports two very large sites and a number of quite small sites/sub-sites. Our ability to match exactly the control data depends on sample size and the level of informant weight involved.

Table 3	Base Full time and self employed Cell									
Orvesto	4									
Internet data	access at home and office									
Site Week reach		reach	Av day reach		Segment reach 1000-1400		1/4 hour reach 1000-1015		Av mins on site Wed 10-14.00	
	Panel	Achieved	Panel	Achieved	Panel	Achieved	Panel	Achieved	Panel	Achieved
	%	%	%	%	%	%	%	%	Avg	Avg
Aftonbladet										
Total	41.0	41.1	18.9	19	13	13.2	2.6	2.2	19.7	19.9
Expressen										
Total	22.0	22.1	8.2	8.2	4.6	4.4	0.8	0.7	12.5	12.4
Automotorsport										
Total	0.4	0.5	0.1	0.1	0.1	0.2	0	0	0.1	0.1
Ab.se/Bil	2.5	2.6	0.4	0.4	0.1	0	0	0	5.9	0
Ab.se/Mode	4.5	4.6	0.7	0.7	0.3	0.6	0.04	0.1	4.3	4.2

Had we relied solely on this segmentation and the calibration levels within the Panel control cells our results would have been no better than a fusion.

However within the Orvesto Consumer survey respondents had reported their recency of visiting each site and sub-site which meant that we could control very precisely who is eligible to have any record of visiting a site within the week and we therefore maintain direct control of duplication levels between sites and print publications from the 'single source' frequency of reading and frequency of visiting claim in Orvesto Consumer.

Accuracy using non-cell-defining variables

Both calibration and fusion use a limited number of variables to define the matching, but in very different ways. In fusion members of the two surveys are matched according to their closeness on the matching variables. It can be that, towards the end of the fusion, two individuals can be 'matched' who are not similar at all. There is *no* control over non-matching variables. One hopes that the non-matching variables correlate reasonably well with the matching variables, but it is a hope not a checked requirement. Detailed fusion checks show that this correlation works quite well 'most of the time', but can at times be very erratic or plain wrong.

In the calibration process we use the defining target cells which are all important. We do not ascribe viewing levels (say) within a target cell outside that cell. This contrasts with the possible mismatching towards the end of the fusion process. Calibration has a similar but much smaller 'correlation of non-target variables' problem, but this is very much minimized when we have, which is usual, the Internet/TV/radio visiting/viewing/listening information described above in the Base Survey.

			Ab.se		Exprn.se Autosprt.Se		Ab.se/Bil.		Ab.se/Mode			
	Base		Base	Panel	Base	Panel	Base	Panel	Base	Panel	Base	Panel
	Population		Survey	calibrated	Survey	calibrated	Survey	calibrated	Survey	calibrated	Survey	calibrated
Sample	16484		3673	5231	1714	2775	53	66	111	344	138	560
Pop 000	7073		1740	2374	791	1241	31	41	58	156	69	273
	Prf^	Idx	Idx	Idx	Idx	Idx	Idx	Idx	Idx	Idx	Idx	Idx
Rather/very interested in:												
Motor Sport	17.4	100	100	103	103	100	289	267	244	241	41	79
Computers	38.7	100	140	129	138	125	155	159	182	166	103	117
Hair Care	31.1	100	90	95	90	97	64	71	65	65	206	181
Life Values segment												
Experiencers	13.4	100	129	122	124	113	68	98	150	116	171	151
Traditionalists	12.5	100	72	78	87	90	59	51	43	63	38	46
Independents	12.5	100	109	109	109	112	147	163	116	122	103	105

Note: Index of Selectivity (Indx) is given by the profile of the site (50.3% of Automotorsport are interested in Motor Sport) divided by the population percent interested in Motor Sport (17.4%) times 100 (=289).

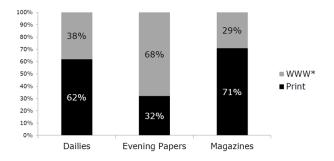
The table above indicates how well this calibration of the Internet panel data to the Base Survey has performed in retaining non-target cell selectivity. Orvesto Consumer provides a measure of respondents' interest in a wide range of topics. We have chosen 3 as indicative; Interest in Motor Sport, Computers and Hair Care. Orvesto Consumer also provides a socio-cultural segmentation (Life Values). We have chosen 3 of the 9 segments for demonstration: Experiencers, Traditionalists and Independents. The indices match very well. There is no real indication of regression to the mean and, as the calibrated indices are both above and below the Base Survey profiles, any differences are more likely to be a function of the differences in panel and recall reach levels and to sample variance particularly for the smaller sub-sites. We can use the integrated panel data with confidence with the wide range of classification data available within Orvesto Consumer.

3. Composition of readership today

So what is then the end result when the data streams are brought together? Among other things the composition of readership can be studied in detail.

We see that digital maturity seem to travel at very different speed. The composition of readership is enormously different between different categories of print media. It has to be pointed out that even the notion of measuring your digital reading is a sign of some digital maturity and the consequence of that is that the sample of sites is by definition skewed from the outset. So this is what can be described as the composition of readership amongst the more digitally mature print vehicles in Sweden (or at least with a digital vision).

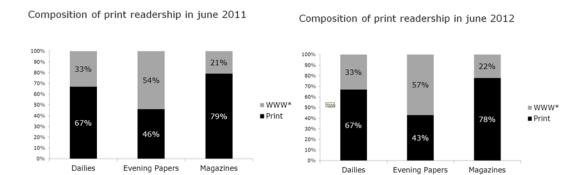
Composition of print readership in june 2013



In the graph above is the current composition in June 2013 and we can clearly see that tabloids are by far leading the digital

Evening papers in Sweden are primarily a digitally read product in 2013. Dailies are trailing behind but are still some years behind.

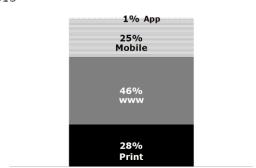
Magazines are relatively speaking lagging behind more heavily and in some cases it seems as if the Evening papers have been quicker to adopt the special interest categories digitally than magazines themselves have.



When we compare to the composition of 2012 and 2011 it is obvious that the compositional change is the greatest for the Evening papers. They have also been by far the first to exploit and adapt to the smart phone/mobile internet revolution. It is also obvious that the most transforming phase for the print industry has occurred in the last 12 months.

For the Evening papers the digital tipping point (more digital than analogue readers) took place in August 2010. Studying the data we expect the first subscribed daily to reach its digital tipping point early in 2014.

Magazines are harder to evaluate since the www is timeless whereas the print magazines and app editions are time bound. For matters of clarity digital has been categorized as 4 weeks of Web since most of the magazines are monthlies. We expect the digital tipping point to be at least three years away with the same definition.



Composition of print readership in Evening Papers in may 2013

Evening Papers

As mentioned the evening papers are the digitally most mature and when their readership is further broken down we see that it still is the WWW that dominates but we also see that mobile is taking a notable share nowadays.

It seems as the mobile platform works well with the content the evening's offer. Apps have just started to be measured but at this point there is no indication that they are to be a game changer.

We can also see the commercial challenge from advertising and copy sales stand point described in the graph above. Print readership is often the consequence of a bought copy and a reader will also normally be exposed to a large amount of advertising.

On the web most content has until now been free and from an advertising perspective the reader will normally be exposed to less advertising than in print.

The mobile challenge makes it even more obvious where readers will be exposed to a quite limited number of ads. So from an advertising model perspective the transformation can be summarized as "in print 50 ads will be revenue streams" on the ""WWW the number will be 10" and on the "mobile it will be 2" bearing in mind the size of screens, time spent and the number of sub-sites visited.

Print readers seem to still be there but the publishing houses have a great challenge to see to it that the business models support the new habits readers are forming. In Sweden the notion of a total reach figure or a brand footprint has been deemed to be of such an strategic importance that dailies has started to deliver a Orvesto Total figure every month to show advertisers their total footprint.

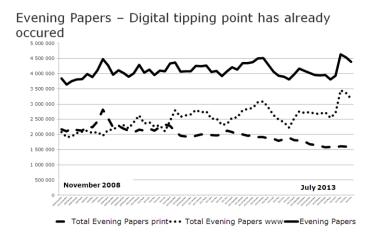


Print has generally speaking been rather quick to adapt to new technology and adapt to changing reading patterns. But now it is time for the business models to follow. The search for the Holy Grail is not anymore about searching for the audience it is a search for business models monetizing the new readers.

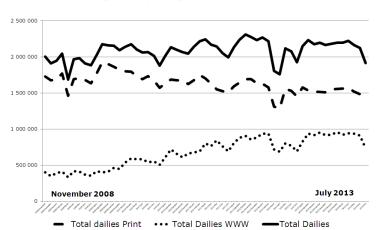
4. The rise and fall of print or the fall and rise of print?

So we have concluded that we see gigantic structural changes in print readership but the question is still if print brands nowadays reach less or more people than they used to in the heydays of printed print.

Starting with the digital stars - the Evening papers - with monthly data from 2008 the following pattern emerges.



The digital tipping point seems to have occurred in August 2010 from that date print has never been larger than digital.

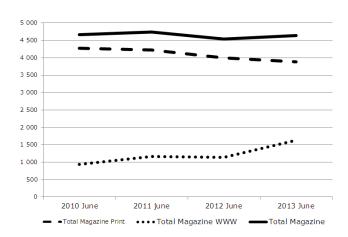


Dailies - The digital tipping point still a year away?

Looking at daily subscribed newspapers we see the same pattern but we also see that dailies are lagging behind a couple of years. Newspapers are in this analysis represented by big city national dailies and it is probable that local dailies are lagging behind a couple of years further.

We expect the digital tipping point to be less than a year away for the dailies in the analysis.





Magazines are definitely more difficult to analyse but it seems as they have woken up from their digital 'beauty sleep' and are starting to bridge the gap. In this analysis magazines are represented by the analysis of the two largest publishing houses in Sweden.

In conclusion we see that from a reader's perspective we are not really seeing the fall of print but more likely are we witnessing the rise of the new print – now with in many cases more readers than ever.

However – new times calls for both new business models and the transformation of existing models such as the advertising model. If Print is to have a successful future the competence and research to support for selling cross media packages will have to be part of the armoury...

5. Creating cross media packages for publishing houses

In this next chapter we will try to expand on our thoughts on how we believe that "with the 4 integrated data streams provided" print brands can create the most effective cross media packages to maximize the advertising revenue.

Buying Web and mobile Page View's is made easy and low cost for media agencies through space brokers offering Real Time Bidding services where effectively Web and mobile advertising space becomes a commodity sold at auction by volume and cpt backed up by Web Metrics which include engagement and response measures.

This makes it difficult for 'branded' Publisher sites in that they have to justify their cpt premiums and where their cross media capability and ability to create synergies might not be taken into account by planners.

The second problem is that the cpts that publishers can achieve for Web Page Views are a fraction of what can be charged for their paper product, particularly those delivered on mobiles screens. This of course has lot to do with the physical size of the ad. and the screen but inevitable these lower Web cpts put a downward pressure on their print cpts.

We believe that 'Packaging' of the different streams offers a means to disguise cpt for the Publisher and to build an 'unmissable' high Net Reach and Gross Volume 'buy' for the media agency/client.

However what works differently for the Web research metrics, compared to the paper product, is that the Gross volume of Page Views includes repeat viewings of that page on the site.

The print 'Recent Reading' (RR) model does absolutely no favours to print titles, particularly magazinesⁱⁱ, since it does not measure a respondent's repeat reading of the same issue over its life (time). This is the first main issue of exposure (OTS) 'non-equivalence' in creating cross print/WWW packages and we suggest a means below to mitigate this.

The second 'non-equivalence' issue is a measure of 'eyes on' the advertisement for print. The RR model measures the reading of an 'issue' of the title and not the reading of a specific page or even 'average' page within it. In the case of the Web page we know that the advertising will be served on the actual Page in View (even if below the scroll).

This is much closer to advertisement exposure than the print definition and should be taken into account in any comparative or combined evaluation. So the combining of print and Web metrics are far from straightforward. The simplistic idea of a 'total reach' or the 'total brand footprint' based on Net Reach is a way for publishers to indicate their total value but it does not take us very far in the process of creating cross media packages.

Augmenting the Recent Reading model

We have, to a degree, addressed these issues for magazines in Sweden through the Quality of Reading Survey (QRS)ⁱⁱⁱ the results of which are integrated into the NRS (Orvesto Consumer). This includes the number of time the issue is picked up by each respondent and the proportion of the issue read and both these elements are used in the Net and Gross Reach estimate. Using proportion of issue read assumes that the advertisement has an 'average page' positioning which the seller can adjust if he is offering a premium position.

In the case of newspapers we do not have the equalivent QRS data but we do create day by day reach levels for newspapers (based on the continuous 'Orvesto day'iv study). This means that we can relate directly PV's available on a Monday from a specific WWW site and the newspaper on the Monday. It also means because the data is held in a time related data format (not probability data) so that we can model the effect correctly of buying 2 or more insertions in one issue of a daily. Thus the Publisher can schedule multiple insertions in a single issue and gain Gross reach and lower cpts.

For Press titles users can apply an Advertising Exposure Probability (ADX) in the software to account for the proportion that will pass the page on which the advertisement will appear on the basis of external page traffic information.

Concepts in Package building

Now for the creation of a Page View offer the seller needs to consider three important elements.

- 1. Proportion of inventory offered (How many page views and at what share of voice does the advertiser want to buy)
- 2. Capping (Is there a maximum exposure frequency put on an individual by the advertiser)
- 3. Timing (over what period will the bought inventory be dispersed)

These three elements are of uttermost importance if Publishers are to present the most appealing cross media package to advertisers. They will now be further explored:

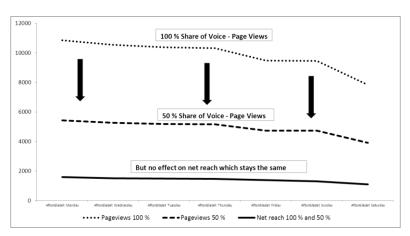
• Proportion of Inventory offered

In theory an advertiser can obviously be offered a 100 % share of the inventory that is available but for the advertiser the cost may be too high and there will be an over-kill issue. From the Publishers side he may prefer to disperse a single advertiser's investment over time to give a smoother sales flow.

Important from both the publisher's and advertiser's perspective is the relation between a reduction in the % of Inventory offered/purchased and Net Reach. Reducing the share of Inventory purchased results in a proportionate decrease in Gross Reach, but the impact on Net Reach is far smaller and in some case it is negligible where the OTS offered by the site is very high.

Indeed we will see later that dispersing the same Gross inventory over time (days and weeks) can lead to increase in Net Reach.

In the graph below the limited impact on net when a planner chooses to buy a 50 % share of voice can be seen. The effect on OTS will be linear.



• Capping

Unlike analogue print, Web and Mobile Page Views can be controlled to be served in any quantity to each unique browser by time of day/day of week. Controlling the frequency by unique browser within a given time period is known as '*Capping*' and is a unique advantage to Web and Mobile ad. distribution in that 'over kill' can be controlled.

It is often the case that heavy TV viewers receive far too many OTS in a given period so that the effect of many of the exposures are wasted or in some cases negative.

When you CAP you are giving the ad. server the instruction to stop serving a unique browser after it has served the ad. a specified number of times within a designated period (day-part/day/week). This process never excludes a browser (only limits the frequency of exposure).

It therefore has no impact on Net Reach since Net Reach is, by definition, those who receive at least 1 Page View.

In developing a package (or campaign) capping also has the advantage in being able to 'force' increases in net reach as once a browser has been served (if capped at 1) it will not be served again in the period forcing the server to choose new (additional net) browsers for each serving.

So capping actually not only limits overkill it can also 'force' the reach of new individuals.

At the same time it restricts the Gross (and therefore the cost payable) that is available for a given time period.

The functioning of capping can be seen in the following table:



- In the example above we can see that if the total day inventory (**row 4**) of 12.578m is served the all population Net Reach achieved is 1.961m each with an average OTS of 6.4 PV's. If the cpt were 100 then the cost would be 1257.8m (SEK)
- If we were to Cap at 1 per day in (row 1) then ad. servings are restricted to 1 per net person (browser). Thus the Net Reach remains at 1.961m but now each with 1 OTS meaning a Gross Reach also of 1.961m. With the cpt remaining at 100 the overall cost with cap in place would be 196m. Of course the server can carry on serving the additional Gross required over subsequent days but if the same cap is in place no one on those days will receive more than one Page View.
- Of course the cap does not have to be as severe a 1 exposure in one day. Examples of a cap at 3 (**row 2**) which restricts average OTS in the day to 2.9 and a cap at 10 (**row 3**) which restricts the average OTS in the day to 6.0, are also given in the table above.

Thus with a CAP alone there is no impact on Net Reach, although at first glance this may seem not to be the case in following scenario, it remains the case.



- In the **first and second rows** all the available inventory of PV's is purchased (12.578m). In the second row this full inventory purchase is subject to a cap of 1 (for that day) resulting in only 1.961m Net (and Gross) PV's being delivered (= Net reach in the day).
- If the user then decides (in row 3) to purchase (any) 1.961m in that day and with no cap then the Net Reach will decline (from 36.5% to 20.7%).

This is because within the 1.961m specified 'Buy' (and randomly selected) will be many who are served multiple times and will only count once for the Net, thus reducing reach. The average exposure rises from 1.0 to 1.3 Adding the Cap back in at 3 has no effect on Net Reach (as there was no one receiving more than 3 exposures) but with a 2 cap it increases Net to 20.9% and with a cap of 1 it forces different browsers to be served, Net reach rises to 26.5% and the OTS drop to 1.

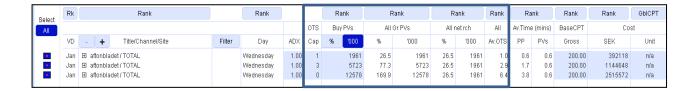
This is why we say that capping will 'force' the Net to increase so long as there are more gross impressions available to be served in the time period.

This control over proportion of inventory and the frequency cap is important for Publishers in being able to control how they distribute their inventory between advertisers. They will not want the total inventory and revenues dominated for particular periods by particular advertisers.

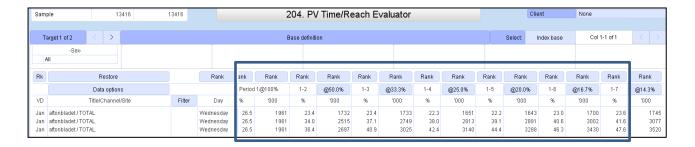
• Timing

But Net Reach is not a constant as it depends on the time period over which the Page View is served. Generally if the Publisher were to deliver the *same* volume of inventory spread over a number of days Net Reach would increase. Exactly how much this changes does depend if any 'caps' have been placed and the total volume of inventory that is involved.

In the example below there are three scenarios. In the **first row** the daily reach is capped at 1 giving only 1.961m impressions to be dispersed over time, then **in row 2** at a cap of 3 giving 5.723m impressions to disperse over time and then in **row 3** no cap at all giving 12.578m to disperse over time.



The Sesame *Time/Reach Evaluator* calculates a range of 7 options based on dispersing the impression over 1 day, 2 days up to 7 days if the vehicle is daily. If the vehicle is weekly it would do the analysis over 1,2 -7 weeks. For the 2 day results it places 50% of the available gross Page Views in each of the days. For the 3 day results it places $1/3^{rd}$ of the available gross Page Views in each of the days and so on up to 7 days. So let us examine the effect the dispersion of page views has on net reach over time.



- If we take the no cap example (**row 3**) allocating to the one day (Wednesday) all the 12.578m gross PV's available (OTS 6.4) results in a Net Reach of 26.5% but allocating these same number of PV's 50/50 over 2 days increases Net Reach to 36.4% (OTS 4.7) and this Net Reach continues to increase up to a split of 1/7th each over 7 days to 47.6% (OTS 3.6) but of course with the resultant decline in OTS.
- With the cap of 3 (**row 2**) the available gross PV's are restricted to 5.723m and as one would expect this limits the Net Reach growth over time but nevertheless Net Reach increases from the 26.5% for their total placement in one day up to 41.6% when spread evenly over 7 days.
- However with the Cap of 1 (**row 1**) and only the Net 1.961m in place there was no increase available in Net reach when these are spread over the 7 days. If fact they decline 3-4% points and then remains stable.

It becomes therefore very important for the Publisher to understand these time/reach/capping and cost relationships in the building of cross distribution packages since otherwise optimal packaging will never occur and prints competitive advantage will be lost – It is of course also important to look at differences within target groups.

6. Building a cross inventory 'package'

In this case the publisher wants to develop a 'package' of his inventory for the fast food outlet category. He defines this target group as those who visit McDonalds, Burger King, Max and Pizza Hut at least once a month. This is a group of 21.6% of the Swedish population.

His first step was to bring together all his different inventory (sites, sub-sites, mobile and Web and the print edition) onto one analysis screen and to rank all his different vehicles according to their Net and Gross Reach and degree of target selectivity on the basis of their one week accumulated net audience. The Publisher has 45 'vehicles' in total at the week level (315 at the day level)

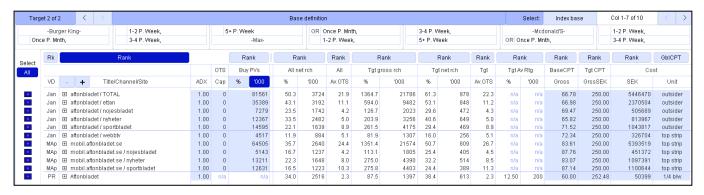
He then deleted all vehicles that did not deliver a threshold target Gross Page View level. Now of course he has complete flexibility to choose the inventory that he puts on offer. Indeed his selection might well be to include difficult to sell inventory in some of the smaller special interest sub-sites. In this case however he chose to offer only sites/sub-sites that provided 1m+. Page Views of the target group with a high degree of target selectivity.

They resulted in the following list of 11 vehicles.



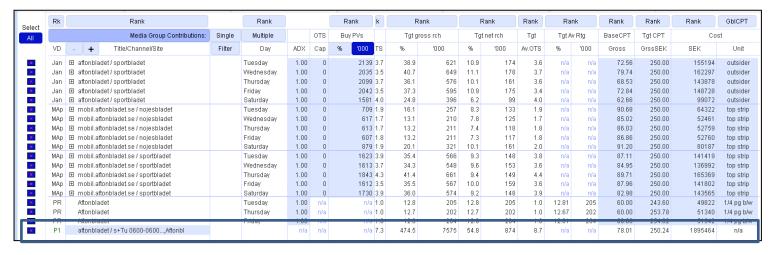
The top ranked vehicles for selectivity are all mobile sites and within these it is the entertainment (nojesbladet) and sports sections (sportbladet) that have the highest selectivity. Further the selectivity amongst the Gross audience is higher that the Net audience indicating that the frequent visitors to these sites are even more target group oriented. It is the same sub-sites (entertainment and sport) amongst Web sites that rank the highest. The analogue paper ranks 5th in Net Weekly reach but has the lowest selectivity and indeed the lowest overall Gross weekly reach in this target group.

The publisher wants to achieve a cpt rate against the target group of 250 Sek, this being the rate that he is achieving in print based on a $\frac{1}{4}$ page b/w for this target group. He inputs this target cpt rate and the software calculates for him the base cpts and absolute costs. For the mobile entertainment and sports sub-site is over 87 SEK . The normative web and mobile rate is around Sek65. So he is actually charging a premium.

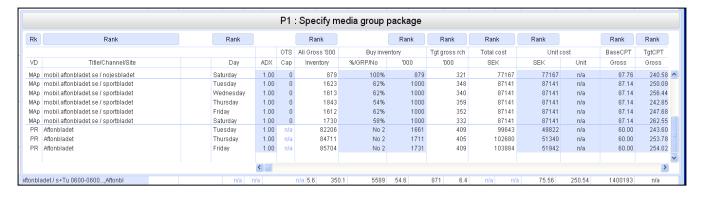


On the basis of this the best cpt returns are from the mobile entertainment and sports sections and the Web sport section. He decides he want to make an offer based on these of around 5m. gross impressions (Print and Digital) in a week. To maximize the gross impressions from the print he will offer 2 ¼ pages in 3 issues during the week and to maximize reach accumulation he will disperse the Page Views from Tuesday to Saturday (being the main eat out/take away fast food days) with a view to at least 20% of the revenue coming from analogue print.

The Publishers expands the total week vehicle (+) to show the day of week results and crops out the days he does not want and then combines them into a 'package' the overall results of which are shown below (last row with blue highlight):



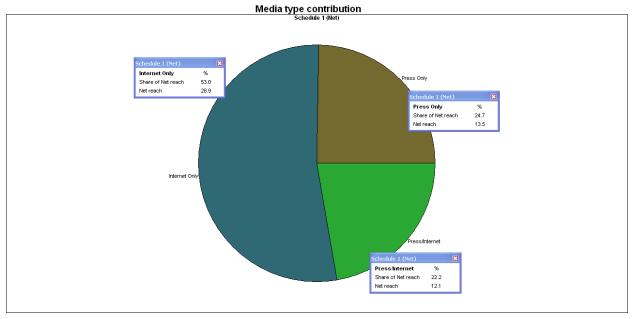
- The unedited 'package' from just grouping the total inventory from each of the vehicles provides an overall cpt of 250.24 Sek against the target, a target Net reach of 54.9% and an average OTS of 8.7 (Gross 474.5%) at a total cost of I.895m SEK (approx €220,000).
- However this is without 'controlling' the vehicle 'buy' within the package to meet the targets. By 'opening' the package he has the ability control each vehicle in terms of the number of insertions/% or number of inventory as well as any cap and the price/cpt.



In the example above the % of inventory has been reduced for the Sportsbladet sites but the insertion levels have to be increased for the print title to 2 per day (which doubles the print gross contacts). The combined effect on Gross is to reduce it from the 474.5% to 350.1% or 5.59m impression and an OTS of 6.4. The effect on Net Reach is negligible (down 0.3% point to 54.6%). The overall cost is 1.4m sek (€163000) of which the Print cost is 22%. And the overall target cpt achieved is 250.54 Sek and 75.56 against the total population (some 10 sek higher than his normal rate). So his initial targets are well met.

Synergies

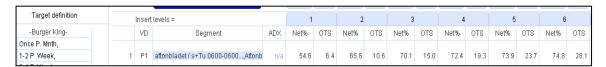
He is able to provide potential clients detailed breakdowns of the package performance in terms of what each media type contribute.



The 'package' can be analysed not only in terms of the combined performance but also in terms of media type contribution. This can be seen in the chart above. Newspapers alone provide a solus target Net Reach of 13.5% (with a 24.7% share of Net Reach) and are not exposed to Internet. Internet alone provides a 28.9 % Net Reach (with a 53% share of Net reach) while those who see both Print and Internet provide a Net Reach 12.1% (with a 22.2% share of Net reach). Those seeing only Print have 3 OTS, those seeing Internet alone have 6.7 OTS and those seeing both have 9.6 OTS. Of course if these OTS were considered too high then capping can be introduced for Internet vehicles.

It is important to note that this 'package' once made up by the Publisher can be entered into the Sesame software in the normal media selection menu as for example 'package fast food'. The planner is able to view the precise content/make up of the 'package' but NOT the pricing of the individual components. Then the package can then be scheduled in the normal way (in combination with any other media) over multiple weeks.

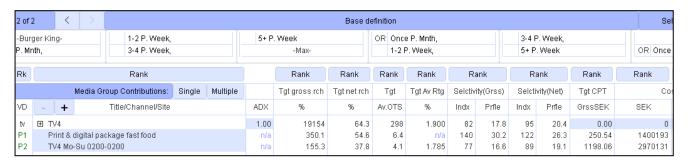
This is a 'package' for one week. The Net reach and OTS level over 6 consecutive weeks is shown below where the target Net Reach can be seen to increase from 54.6% and 6.4 OTS with 1 week to 74.8% and OTS to 28.1 with 6 weeks.



Comparing and combining the Print and Digital package with TV

Let's assume that one of the major fast food chains is proposing to run a TV campaign (only on TV4) with a budget of 3m Sek for one week. In the same way we create a 'package' for TV4 spending 3m. SEK run of week at a cpt of 200 Sek.

This is shown in the table below and first thing to notice is that TV4 has a negative selectivity towards the target groups. Whereas the print/digital package has an overall selectivity index gross of 140, TV 4 is only at 77 and in consequence its cpt of the target is nearly 5 times that of the print/digital package and the budget of 3.0m produces less than 50% of the Gross contacts of the Print and Digital package . Overall from the 3.0m Sek spend TV4 produced 155.3 target GRP's , a Net Reach of 37.8 and 4.1 OTS.



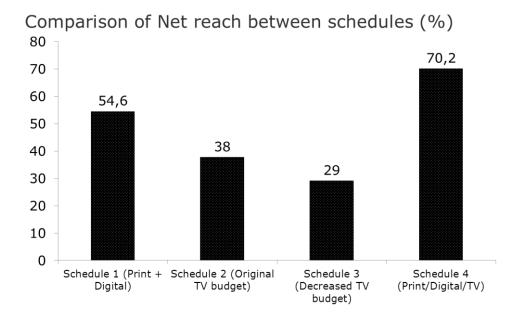
Of course these is a difference in the communication impact of a 30 second commercial and the relatively small ad. units in the paper and digital package streams but there is clearly a strong imperative to increase reach and frequency and the synergies benefits for those seeing both the TV commercial to the print/digital advertisements.

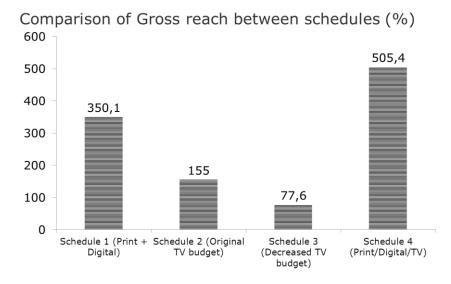
Our proposal to the client would be to reduce the TV budget by 50% in order to buy the print/digital package and produced a combined schedule evaluation. The reduction in the TV budget reduces TV Net Reach from 37.8 to 29.2% and Gross by half to 77.6 GRP's

In the following table chart we compare the Net, Gross and average OTS levels for the 4 schedules.

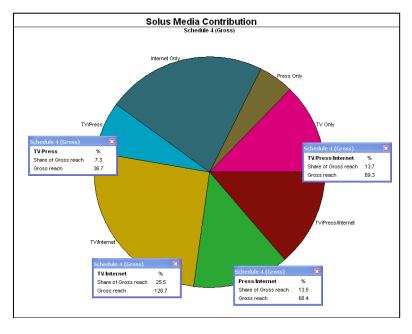
- Schedule 1. The 1.4m Sek Print/Digital package provides 54.6% target group Net Reach, 350.1% Gross and 6.4 OTS.
- Schedule 2. Original TV budget
- Schedule 3. The comparable cost TV schedule provides a net of 29.2% with 77.6 GRP and 2.7 OTS.
- Combined the Print/Digital/TV however increases the target Net Reach to 70.2% and the Gross to 505.4% with 7.2 OTS.

This almost doubles the Net Reach from the 3.0m Sek TV campaign while the Gross Contacts increase 3.2 times.





As well as significantly increasing the Net and Gross Reach approaching half (46.5) will have both TV and Press or Internet contacts giving rise to possible synergies resulting from the different attributes of each of these media.



All in all it seems as intelligent packaging of the publisher's inventory will lead to a stronger digitally and analogue united media house which better can compete in the cross media competition.

6. In Conclusion - Doom or gloom for print media

So will the digital transformation of print lead to doom or gloom? Let us summarize the facts as we see them as follows:

- The digital transformation has made the average print brand in Sweden bigger than before.
- This is however not true on an individual title basis and it seems as some print categories are lagging behind.
- Print brands in general do not have an audience problem they have a business model problem.
- The advertising model is obviously one of the areas that need new thinking and stacking the analogue brand onto the digital brand might as a start be a good idea from a rhetorical perspective.
- This is however not enough in a real planning environment since it is not a relevant assumption that a media
 planner would buy 100 % of a sites share of voice and it actually makes the publishing house package look rather
 less favourable than could otherwise be the case.
- Print brands need to take page views, share of voice buying and capping into account when they create their advertising packages.

- This will most often severely cut costs and "overkill" and will ultimately lead to more effective cross media campaigns.
- Media research needs to measure all the data streams of print in a manner that is comparable in Gross as well as Net terms.
- All data streams need to be integrated with each other and ideally in a TGI (full target group database) with cross media data and planning available.
- Media research needs to encompass top level research design with mixed mode data collection with data integration techniques with cross media planning software If this is the case a day of doom might turn into a day of gloom.

ⁱ **The better alternative to Fusion**: A modelling procedure that simulates independent media 'currencies'. By Peter Masson and Dr. Paul Sumner, Sesame Systems Ltd., London ESOMAR Worldwide Multi Media Measurement Conference Shanghai, China, 4-7th June 2006

ii Magazines need time: Peter Masson, Bucknull & Masson London, FIPP Research Forum, London May 2012

The DNA of the new magazine reader – Orvesto QRS 2013; Peter Callius PDRF Nice 2013

^{iv} Newspaper and Magazine Consumption off- and online. A future printed in full colour or in black and white: Peter Callius and Anders Lithner, Research International, Prague WWRS 2005

V Cross-media: What's in it for the media owner? Peter Masson, Bucknull & Masson, London and Peter Callius, Sifo Research International, Stockholm (WAM 2003 LA)