

"TO MATHEMATICALLY MANIPULATE OR TO MAKE AN ACCOUNTABLE JUDGEMENT?" THAT IS THE QUESTION....WHILE WAITING FOR THE WEARABLE PASSIVE INTERMEDIA METER

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As most of the delegates to this symposium are aware, my partner Lee Weinblatt and I have been involved in the development of an Intermedia Wearable Passive Meter for over ten years. Our work and discussions with other colleagues like Marion Confer (then of New Yorker, now of MPA) even predate the Montreal symposium, when the concept of electronic print measurement was formerly introduced by Time Inc.'s Clark Schiller and Bob Schreiber.

Increasingly we are confronted with requests from advertisers and agencies for better intermedia data to use until the measurements can deliver. "Fusion" - introduced in Salzburg in 1985 by Sigurd Bennike, Jacques Antoine and others seems to have increased its use around the world. It is troubling.

In the United States, we are currently living through a "crisis of ignorance" driven by exploding technology, "downsized" media and media research departments and almost no formal training. Increasingly, we throw the young people entering media, into the sea of media research data forcing them into over reliance on efficiency and other models. Many, if not all of the delegates to this Symposium fight this crisis of ignorance every day. The use of fusion - merging data bases - was always questionable, but now the momentum while we wait for the Wearable Passive seems insurmountable. Fusion models are more powerful and therefore more dangerous than simple Reach & Frequency and Optimizer. We should consider this problem as we go forward.

The premise of the paper is a judgemental model, which has an open presentation of "judgemental" intermedia weights, is a far superior way of structuring one's thinking and actually doing intermedia planning than using a "Mathematical Donor" - one size fits all * - model. The alternative of using fusion systems or models which attempt to link respondents from one survey to another mathematically will be obfuscating, confusing, dangerous and lacking in accountability.

- * The objective of fusion is to add to recipients' sample simulated data available in the different sample, i.e. the donor's sample. From Santini "Validation of data Fusion..." Barcelona 1989.

At worst, the mathematical fusion models seem to allow "Donor Models" to be responsible, not the media planner. At best they only make a few people within an organisation think about the judgements that are the bed rock of even the best of the Fusion Donor Models.

This paper will review very briefly:

- Wearable Passive Intermedia measure;
- Review the previous symposium papers on fusion from Barcelona and Hong Kong;
- An example of Judgemental Model.

The Wearable Passive Meter for intermedia measurement was discussed fully by me in the proceedings of Barcelona in 1988 and Hong Kong in 1991. Here on that subject I wish to report that after an intense series of discussions with major players in North America, Europe and Asia, the reality for a tested model of the television portion and perhaps the print will be on target - 1995.

The Wearable Passive Meter development or a similar electronic system is a goal (some might say obsession) for me and others in media research. The reason is we want to know from a probability sample with a high rate of cooperation (60% is the target) without relying on human memory, how many times EACH PERSON in the sample was:

- “In front of a television set with the audio on and within a given distance;”
- Exposed to which magazines and newspapers and for how long regardless of place of reading;
- Within audio range of a broadcasting radio station;
- Between purchase intervals.

SO WE CAN:

- Begin to understand how people rely on and interact with media;
- Have **REAL REACH AND FREQUENCY DATA** within and across media;
- Begin to determine with - **ACTUAL BEHAVIOUR OTS DATA** - how much media frequency is enough, and test:
 - for brands using media (one or more) alone;
 - for brands using “out of store” media, coupons in store;
 - for brands using in home, out of home, in store and out of store promotions etc.

That is still in the future.

At present agency account groups working with their clients, make judgements to assess each medium. Some agencies, such as Foote Cone & Belding, developed an elaborate process of organizing their thinking and discussion - The Stage One/Stage Two model. FCB was, and is, open about the process. The decisions are made and reviewed each year. Those decisions are made in the sunlight of open debate. Anyone could bring data to FCB and they would listen, critically assess, discuss and debate the merits of the data and the impact upon their model. That was certainly the case with the Eyes On and Accumulation study I did at Newsweek with Audits & Surveys.

Those judgements are based on the experience, training and bias of the media/ media research professionals, account groups and clients. Many times the desire to use television is not based on realities if you were A **MAGAZINE EXECUTIVE**. Wearable Passive data will fuel that discussion, provide better data, and probably will not resolve it absolutely. But once the real data is here those judgements about TV and magazines will be tested.

To fill that vacuum we have developed two forms of fusion:

- Fusion Donor mathematical models (data fused after the judgements of one individual have been made on the process);
- Fusion **Judgemental** models where each weight applied to an individual medium has a body of data and a written rationale to support that weight.

In Barcelona, in 1988, four excellent papers were presented covering the general subject of fusion. They were:

- **A STUDY ON THE VALIDITY OF DATA: THE INDIAN EXPERIENCE** By Ramesh Thandani & Ashutosh Sinha of the Indian Market Research Bureau;
- **VALIDATION OF DATA FUSION TECHNIQUES: WHAT CAN STATISTICAL THEORY DO FOR US?** By Gilles Santini, IMS, France;
- **FUSION, INTEGRATION, ASCRIPTION AND INPUTATION** By Martin Frankel & Pamela Baxter, of Simmons Market Research Bureau;
- **THE ART OF MODELS - ASCRIPTION IN GERMANY** By Rolf Speetzen of Axel-Springer Verlag AG, Germany.

It seems clear from those papers that fusion was possible between two similar studies which had properly representative samples containing information sets collected from respondents in identical conditions (Frankel). The attempts described by the German and Indian papers strongly suggest that as the Indians said:

- 1 "Fusion seems to work better for higher order readership and viewership levels than for low levels."
- 2 "Fusion is likely to be more successful in replicating a 'macro' level behaviour, such as type of magazine or newspaper read rather than a PARTICULAR publication"
- 3 "A better match will be achieved between donor and recipient where there is a large sample to draw upon."

The Frankel-Baxter paper, and the Santini paper discuss at length the statistical issues involved in fusing data bases. I am sure, looking at the program for this Symposium, those same speakers will add to that discussion.

What concerns me is that the judgements that must be made prior to the mathematics being applied are very important, and can have tremendous impact on the outcome. These mathematical models can give the illusion to the media buying community that these are substitutes for single source, or true inter media studies. They are judgement models in a neat mathematical package. I would like to seek some consensus on how we position these models while we wait for richer, raw data to make them less necessary.

Intermedia fusion models must be used with great care and only by individuals trained in media research who have a clear understanding of the goals (marketing, creative, media, etc.) of each of the account groups. Santini makes two points in his paper that he did not seem to stress in that oral presentation in Barcelona five years ago. The first was:

"My intent here is not to discuss the usefulness of fusion nor the legitimacy of the method, nor to argue about the best way to operate. My sole concern is to go back to basics, restate what fusion attempts to do, and elaborate on what could be considered as possible statistical procedures to test the goodness of fit of a given fusion."

Is fusion legitimate? Under all circumstances? We should be debating that subject as much as anything else in this Symposium, now. We debated that in Hong Kong a bit, but now we should try to seek closure on this issue.

The other quote that really concerned me was this one that followed Santini's very complete review of testing procedures:

"...these checks do not guarantee the reliability of the produced data but are important indications of what may have happened."

After all that good mathematical work, it was unclear how Santini knew he had the "right" answer. Were his beautifully applied mathematics "cosmetics" covering up an incredibly dangerous (because if could not be validated) data base available via computer bureau to the inexperienced?? The data may correspond to the control data base on a crude level, but was that data base (like MRI in the USA, or TGI in UK) meant to measure television? How was that accounted for and is that right? The answer should not be: It looks OK but... **It might be better to take an educated guess than use the fused data.** The Wearable Passive will have to go through the Gold Standard of Print (Full Through the Book, No Screen etc.) and Television (telephone coincidental) process. What is the standard that "fused" data must meet before used in a brand (as in life of the brand) threatening situation?

The papers from Hong Kong reported on additional case studies about fusion. Those papers were:

- **MAKING DATA SETS COMPATIBLE FOR DATA FUSION: RESULTS OF AN INDIAN EXPERIMENT.** By Sankara Pillai, Ashutosh Sinha, Indian Market Bureau, Bombay, India;
- **READERSHIP MEASUREMENT THROUGH TELEVISION PANELS. A FIRST STEP TOWARDS INTEGRATION.** By Leender Van Meerem, AGB - the Netherlands;
- **FUSION - BRITAIN'S LATEST EXPERIENCE.** By Richard Bedwell, BMRB, UK;
- **TO FUSE OR NOT TO FUSE, OR WHY MAKE IT SIMPLE WHEN IT CAN BE COMPLICATED** By Uwe Czaia and Rolf Speetzen, Germany;

They suggest the following conclusions:

- The small and poorest quality data base drives the fusion;
- Supports the 1988 Indian paper that only macro dimensions can be used;
- The data developed in the Netherlands, Germany and UK suggest that progress on the macro level was made and as the German paper pointed out when making decisions about data bases and the issues of compatibility, common denominators are:

“...infinitely more complicated than the actual Fusion.”

This leads me to conclude that we may be better off with what I referred to before as open judgemental models which stress the front end of the process. **Judgemental** fusion models, where each weight applied to an individual medium has a body of data and a written rationale to support that weight, is essential if we are to move forward. Some examples are:

- The “Eyes On” weight devised by Newsweek for television, which documented that on average 40% of the people were not in the room during a television break. Perhaps those in the room should be called Core Viewers, no they are not all attentive. That is a separate discussion of weights, the definition of viewing and effective viewing;
- Various reader quality scores, e.g. time spent reading, number of page opened, etc. (The 1992 Millward Brown work for example);
- Sunday magazines being down-weighted because of the belief that measuring the carrier papers overstates the audience. People do not pick up and open specific supplements and they throw away the free standing coupon inserts in the Sunday Newspapers.

The first exhibit attached is a copy of the TimePlan work sheet from the Telmar model. In the first exhibit the weighting column has no data in it. The audience numbers could be adjusted prior to moving on to this sheet. The television numbers shown here are adjusted to Nielsen. “Why?” you ask. Because the agency that we are presenting to believes those are the true numbers.

The second exhibit applies Eyes On weights to prime time .60 and page opening weights for magazines .90 and the carrier paper discount weights for Parade .60 and the FSI's - free standing inserts (40%) media weighted data. The “data” that supports those discounts was cited above.

The rationale are not here, but footnotes should be here. The supporting data should be available in writing. The weights column say “why did you do that? - what is your rationale to defend that position?” The Telmar Timeplan (or any judgemental) system is a partial quality control step, since it forces those questions to the top of users minds before they use the system.

The magazines numbers from MRI could be adjusted downward if you believed that recent reading produces too high a level and “true” reading levels are .714 (from the ARF comparability study comparing the two methods). Both those judgements can be quarrelled with by many people in this room including me.

The first choice a intermedia modeler has to make is what level of reading, viewing, listening, etc. to use. For television in the USA, it could be data based on people who push buttons or people who fill in diaries from samples of co-operators who will stay in a panel for a long period of time. For reading MRI (personal

interview, three position screening or filter, recent reading, one time interview, etc.) produces 29% to 30% greater level of reading than Simmons (Issue specific - stripped issue, personal interview, etc.). Nielsen Home*Scan (sample of in home co-operators, MRI look alike administered via direct mail, etc.) is on average 86% higher (T. Joyce, Methodology and Levels - October, 1991).

The ability to use the weighted or unweighted number should be in skilled, not unskilled hands. MRI, Simmons, TGI etc. data bases must push for and should require the publishing (or presenting) of two sets of numbers - weighted and unweighted; if they allow weights to be applied to their data for use with a third party in a buying or selling situation.

The computer bureaux believe in letting the client make the choice as they see fit. They will load what will serve the clients and the data bases. Most computer bureaux stress that the user should be fully aware of the weights used, but their job is to compete in an open market place by providing as flexible a system as the market demands.

Another example of choice is Telmar provides several different estimates for their audience accumulation model - TimePlan. If you wish to use a single set of curves applied to MRI, Nielsen Home*Scan and Simmons; you can **use a generic curve developed in the late Seventies model on a through the book method**. If you believe the different methods are crudely capturing the audience relationships, but producing different levels because the method is capturing different levels of reading; **each method should have a different accumulation curve**.

Simmons, is issue specific, suffers less from telescoping, etc. It must accumulate audience faster than a non issue specific, recent reading method. MRI, by definition, should have a slower audience accumulation. Nielsen Home*Scan would be the slowest yet.

Telmar TimePlan in the USA provides different audience accumulation curves for each method. That is a "judgement"-conclusion - discussed in the context of historical information in a 96 page paper, "Timing Advertising and Promotion a Research Perspective..." I produced for Telmar in 1992. That means anyone in this room can review that paper and decide which curve, if any, to use. The Wearable Passive will make the need for those models unnecessary or at least provide true audience accumulation information across all media for the first time.

The fusion models based on elaborate donor schemes described in Barcelona and Hong Kong seem to relieve the user of thinking. Which seems to me the problem. **It might be better to take an educated (and well documented) guess than use the fused data**. I look forward to the debate on this subject.

BIBLIOGRAPHY**From Barcelona**

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Eyes On - Audits & Surveys for Newsweek conducted in 1978 & 1980. By: Douglas, Stephen A; Lysaker, Richard; and Frankel, Lester.

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Universe: WOMEN WOMEN 25-54					Universe Size: 54,827 (000's)								
					12 weeks: 28/Jun/93 - 13/Sep/93								
Magazine	Wght	Reach	Cost	CPM	ALL	28 Jun	05 Jul	12 Jul	19 Jul	26 Jul	02 Aug	09 Aug	
BETTER HMS & GARDEN	90.0	31.7	0	0.00	3	X				X			
COSMOPOLITAN	90.0	15.9	0	0.00	3		X				X		
FAMILY CIRCLE	90.0	31.5	0	0.00	3	X				X			
PARADE	60.0	25.9	0	0.00	2			X				X	
USA WEEKEND	60.0	14.9	0	0.00	2				X				
VALASSIS	40.0	27.6	0	0.00	3		1				1		
WOMAN'S DAY	90.0	27.7	0	0.00	2							X	
MURPHY BROWN	60.0	8.4	0	0.00	3	1				1			
MURDER, SHE WROTE	60.0	7.2	0	0.00	3		1				1		
SISTERS	60.0	4.8	0	0.00	3			1				1	
Cumulative Reach %					96	30	55	68	73	79	85	88	
GRPs					518	35	45	37	22	42	50	55	
Insertions: 27		Total cost: 0		Total imprs. : 284,196		CPM: 0.00							

Universe: WOMEN WOMEN 25-54					Universe Size: 54,827 (000's)								
					12 weeks: 28/Jun/93 - 13/Sep/93								
Magazine	Wght	Reach	Cost	CPM	ALL	28 Jun	05 Jul	12 Jul	19 Jul	26 Jul	02 Aug	09 Aug	
BETTER HMS & GARDEN		35.2	0	0.00	3	X				X			
COSMOPOLITAN		17.6	0	0.00	3		X				X		
FAMILY CIRCLE		35.0	0	0.00	3	X				X			
PARADE		43.2	0	0.00	2			X				X	
USA WEEKEND		24.8	0	0.00	2				X				
VALASSIS		69.1	0	0.00	3		1				1		
WOMAN'S DAY		30.8	0	0.00	2							X	
MURPHY BROWN		14.0	0	0.00	3	1				1			
MURDER, SHE WROTE		12.0	0	0.00	3		1				1		
SISTERS		8.0	0	0.00	3			1				1	
Cumulative Reach %					98	35	80	87	89	91	94	95	
Weekly Net Reach %						35	75	48	29	37	75	56	
GRPs					770	44	93	58	33	52	98	78	
Insertions: 27		Total cost: 0		Total imprs. : 422,380		CPM: 0.00							

