The Douglas Group

Some Background and Comment on FCB's Umpire
and Prototyping etc. in the USA
Umpire: Unmeasured Magazine Profile-Distance Method

by Stephen A. Douglas

In April, 1990 Roger Baron announced the FCB system, Umpire as an aid in judgement in selecting the best prototype of an unmeasured magazines. This prototype is used in the computer as surrogate for an unmeasured magazine in efficiency rankings, optimizations, reach/frequency analyses, etc. Roger's paper follows; but first a very brief summary of the evolution of "making up the numbers" in the U.S. as a word of background.

As members of this symposium are well aware, all agencies must consider magazines not measured in a national syndicated readership data base, such as AGMA in Germany, PMB in Canada, NRS in UK or Simmons, MRI and MMR in the U.S. Some of you are from countries that do not currently conduct National Readership Surveys. When Dawn Mitchell heard about the concept, we thought we should present it because it works. Roger is unable to join us because of earlier commitments and the mini recession in the U.S.

Media planners need audience estimates for unmeasured magazines. In short we make up numbers, in the U.S. Some numbers, as Marty Frankel pointed out in a recent ARF paper, are more made up than others.

There is, in fact, a major group of agencies lead by JWT-Chicago that resist prototyping. Their reasons are that having a number implies certainty about the judgement that went into making up that number. JWT thinks it must be a more reasoned position.

The problem is that the media departments have all had reductions in the number of people per million dollars of billing. It seems logical that centralizing the prototype analysis in the media research function makes a lot of sense. The media research department does the analysis and makes recommendations to groups of senior media executives (say five years or more experience with titles like Associate Media Director or Media Director). This group then reviews the logic of the recommendation, accepts it, modifies it based on experience, or sends it back for more study. This saves time of the planners and standardizes agency positions. That can be good because it requires less man hours in the process, and bad because it removes responsibility from young planners to learn.

Media evaluation of unmeasured magazines requires the following data be reviewed by EACH individual planner, group of planners, and (or if you use a centralized system) a media research executive:

- The magazines' editorial content and history;
- The magazines' circulation history and audit statements;
- High quality subscriber studies (Typically direct mail with a response rate of more than 50% and following the American Association of Advertising Agency guidelines).

Not having any or poorer quality versions of the above information hurts an unmeasured magazine in agency review process. Another negative is if the magazine is controlled (not paid for but sent unsolicited [that is the worst] or requested individually, but still free).

We use two methods:

- Simulations;
- Prototypes.

A simulation is:

> "...used to describe the output of a process in which a magazine vehicle is created on one of the syndicated audience data bases not from respondent reporting but from mathematical modeling. Simulation is typically carried out by one of the on line data processing companies according to a given set of mutually exclusive and exhaustive population segments.
>
> "...unlike prototyping which is replicable, simulation may not be replicable. ...if two different individuals specify a prototype using the same assumptions, they will produce the same results."
>
> Martin R. Frankel, Ph.D.
> ARF Issues Workshop
> July 11-12, 1989.

Simulations have been severely attacked by the agency media research community because they do not have a direct tie to actual behavior. The method constructs an artificial person solely on the basis of a few demographics. This can cause embarrassing anomalies - for example, some simulations of skiing publications do not produce any skiers in the readership.

Traditional prototyping procedures include:

- Taking a similar magazine, say a Travel & Leisure which is reported, and raising or lowering the audience level (RPC) and calling it Travel Holiday, an unmeasured magazine. Umpire helps resolve the problematic question, "Which is the most similar magazine?"
- Taking a weighted average of two or more magazines, like 50% of Travel & Leisure's audience, 25% of American Way's and 25% of Gourmet's to equal Travel Holiday. Again, Umpire can help the planner select which magazines to use.

- Selecting a host publication, Travel & Leisure again, and re-weighting demographic composition say of age, or age within income, and making that a new travel magazine. This is called a composite method. One of the advantages of the composite method is that we can us it to estimate the audiences of very extreme populations. For example just using the college graduates who read the Wall Street Journal seems to produce a very realistic estimate of readers of Ivy League College Alumni publications.

  The composite method was developed by the Newsweeklies to estimate the total audiences and compositions of the demographic editions of Newsweek, U.S. News, and Time. These editions are made up of subscribers who have been qualified by questionnaire job title (for Time Top Management) and job title and income qualified for Newsweek Business. To estimate demographic editions, audience and share job title estimates are derived from the use of subscriber data relative to either MRI or Simmons. For complete descriptions contact any news magazine office and they will be glad to provide you with a copy of their respective versions;

Umpire

Umpire is an aid in the process of selecting a magazine as host to better estimate composition for the prototype. Roger Baron has invented a program that takes five pieces of information from a subscriber study. The five pieces of information are:

- % Women;
- Median age;
- % Graduated college plus;
- Median household income;
- % Married.

How he arrived at these demos and the validation of the work is thoroughly reviewed in the FCB paper following. In short, Umpire uses the delta-square statistical technique to create a score for each potential prototype that indicates how close it is to the demographic profile of the unmeasured magazine's subscriber study.

The validation process shows that the profile of Umpire's recommended prototype is remarkably close to that of the actual magazine, not just on demographics, but also on product usage) when finally measured and reported in a recent reading system. Correlations for most of the magazines tested are in the mid-nineties. In short, it meets the test of predictive validity. It works in almost all cases. There are some exceptions.

It does not work for:

- News magazines - there are several possible reasons. I suggest that the reader per copy produced by the ubiquitous public place availability is the answer. Some have suggested the quality of the subscriber study was not good. I believe it is the former not the latter.

- College publications - Ivy League Network - the audience is too upscale. Further, there is no publication in MRI with the high concentration of college graduates that would be likely for this publication.

- Highly upscale magazines - such as Art and Antiques or Nation's Business. The delta-square for these are the thousands, compared to typical magazines which score in the low hundreds. This is not an indictment of the Umpire system. Rather, it says that these magazines are so upscale that there is no suitable prototype in syndicated research.

These few cases just confirmed Roger's point that the model is not a substitute for thinking. It is meant to help speed up and or expand the researcher or planners options.

The Umpire system's objective is:

> "To find the single magazine or group of magazines that most closely matches the demographic profile of an unmeasured magazine readership study."

Total audience and readers per copy remain media research judgements. FCB stresses, as I do, that beyond the numbers, planners will still have to evaluate the new magazine's qualitative values and the appropriateness of editorial environment for their particular product.

The complete paper by Roger Baron follows or is available in the most recent issue of the Advertising Research Foundation Journal of Advertising Research, Fall Winter 1990.

USING THE PROFILE-DISTANCE METHOD TO SELECT UNMEASURED MAGAZINE PROTOTYPES

by

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In today's world, the computer has become essential for magazine planning It stores syndicated readership data, it calculates their relative efficiency, and it estimates the reach and frequency of alternative schedules.

That's fine if we are talking about the several hundred established magazines that are measured by syndicated research. But what about new magazines, or those that choose, for one reason or another, not to be included in tne general studies? Now the planner, and most certainly the magazine sales staff, have a big a problem. At many agencies, if it's not in the computer, it's not looked at, it's not considered for the schedule, and it may as well not exist in so far as that advertiser is concerned.

To solve this problem, we need some kind of surrogate that can represent the unmeasured magazine in media analyses. One approach is to simulate its readership by artificially designating a group of respondents whose demographics match those of the new publication. In our opinion there are serious problems with simulations because there is no tie to the reality of magazine readership. This can cause real problems when working with product usage.

The more accepted method is to use a prototype - that is, a measured magazine that is similar to the unmeasured book. But the process of selecting the best prototype has been problematic and highly subjective.

It's not for lack of effort on the part of the magazines. Millions of dollars are spent every year on proprietary readership studies. The problem is not with the studies - it's that the planner doesn't know what to do with them - they don't know which demographics are most important and they have no way to handle the data. If they were matching on just one demo - say median age, the task would be easy. But to be accurate you need several demos - sex, income, education, and so forth - and now the planner is faced with a mind-boggling array of numbers, and a mental process that goes something like, "This magazine is close on age but it's income is too low; on the other hand that magazine is fine on age and income but there are too many men."

In despair, the planners toss the expensive readership study aside, and turn to something they can understand: editorial similarity. But, as Debbie Solomon pointed out in our debate at the ARF Workshop last year, new magazines go to great efforts to find a unique editorial niche - choosing a similar existing magazine can be very difficult. And besides, just because one magazine is in the same general editorial category as another does not mean that it's readers have the same demographics, or more important, the same lifestyle and product usage patterns.

Demographics predict lifestyle. The readers of Architectural Digest are part of a socioeconomic group that is described, not only as people who live in expensive houses, but also, as people who have the money, education, and outlook to be interested in a range of different subjects, and, more important for our purposes, to selectively read certain magazines: Gourmet, Travel & Leisure, Psychology Today, the New Yorker, and so on. These are the magazines that should be considered as prototype candidates, and we can find them by matching demographic profiles.

FOOTE, CONE & BELDING

UMPIRE

UNMEASURED MAGAZINE

PROFILE SYSTEM

To do this, FCB has developed UMPIRE, the Unmeasured Magazine Profile system.

OBJECTIVE

To find the single magazine or group of magazines that most closely matches the demographic profile of an unmeasured magazine's readership study.

It's objective is to find the single magazine or group of magazines that most closely matches the demographic profile of an unmeasured magazine's readership study. The prototypes are only used to get estimates of audience composition for the computer. Total audience and reader-per-copy remains a media research judgment. Beyond the numbers, planners will still have to evaluate the new magazine's qualitative values and the appropriateness of its editorial environment for their particular product. Here's how UMPIRE works.

MOST PREDICTIVE DEMOGRAPHICS

Sex (% women)

Median age

Graduated college plus

Median Household Income

Married

We begin by identifying those demographics that are most predictive. Later we will discuss how we did that - but for now, let's assume that they are sex (woman composition), median age, college grad plus, median household income, and married.

MRI SPRING, 1989
(Primary Readers)

MAGAZINE	WOMEN	MEDIAN AGE	COLL GRAD+	MEDIAN HHI	MARRIED
1001 Home Ideas	72.4	38.3	21.9	40.2	78.2
4 Wheel & Off Rd	23.2	28.3	6.3	28.5	49.2
American Baby	74.7	28.9	28.5	33.5	92.3
American Health	72.7	42.3	26.8	36.9	69.0
Arch. Digest	50.0	42.5	62.8	62.3	56.1
Audubon	46.7	49.7	42.2	40.8	61.1
Baby Talk	76.5	27.4	16.0	36.3	77.2
Barrons	22.8	38.4	63.4	58.4	66.2
Bass Master	19.5	38.2	11.5	31.7	73.4
Better Homes	71.2	44.8	21.5	38.8	76.0
Bon Appetit	70.7	40.8	37.0	60.0	67.7
Bride's Magazine	96.2	36.2	17.4	42.0	49.8
Business Week	26.6	46.8	49.3	61.8	66.2
Car Craft	13.8	24.8	6.7	28.9	41.5
Car & Driver	13.3	28.8	22.3	42.1	42.0
Changing Times	42.0	54.2	31.7	40.4	62.1

We downloaded these five demographics for the primary audience of every magazine measured by MRI - alphanumerically from 1-Z, from 1001 Home Ideas through Yankee. Since ultimately we are going to be using these magazines as our prototype, we cut the list back to 125 national, non-ethnic magazines with more than 150 annual respondents. So now we have our datafile - five columns wide by 125 magazines long.

We enter the five demographics from the ummeasured magazine's readership study, and compare them, one at a time, with those on the database. The method is to find the lowest delta square. It's not a new technique - it goes back to Euclid in ancient Greece - but it's handy for what we want to do.

SAMPLE CALCULATION

MAGAZINE	WOMEN	MEDIAN AGE	COLL GRAD+	MEDIAN HHI	MARRIED	DELTA SQR
ARCH. DIGEST (readership study)	65.4	46.0	61.1	71.4	64.9	
1001 Home Ideas (MRI primary aud)	72.4	38.3	21.9	40.2	78.2	
	....	....	....	....	....	
DELTA	-7.0	6.7	29.2	31.2	-13.3	
x	-7.0	6.7	29.2	31.2	-13.3	
	....	....	....	....	....	
DELTA SQUARE	49.0	44.9	852.6	973.4	176.9	= 2,097

Suppose Arch Digest was a new, unmeasured magazine. Its subscriber study says that 65.4% of its readers are women. For the first magazine on the database, 1001 Home Ideas, 72.4% of its readers are women. 65.4 - 72.4 equals negative 7.0. We square this to get rid of the negative sign and do the same calculation for the remaining four demographics. The five delta squares are added together to get a score of 2,097 for 1001 Home Ideas as a potential prototype of Arch Digest.

MAGAZINE	WOMEN	MEDIAN AGE	COLL GRAD+	MEDIAN HHI	MARRIED	DELTA SQR
ARCH. DIGEST	66.4	46.0	61.1	71.4	64.9	
4 Wheel/Off Rd	23.2	28.3	6.3	28.6	49.2	
DELTA	42.2	16.7	44.8	42.9	16.7	
x	42.2	16.7	44.8	42.9	16.7	
DELTA SQUARE	1781	279	2007	1840	246	• 6,153

The second magazine on the list is 4-Wheel and Off Road. How good a prototype would it be for Arch Digest? Not very - just about everything is wrong. Its delta square is 6,153.

MAGAZINE	WOMEN	MEDIAN AGE	COLL GRAD+	MEDIAN HHI	MARRIED	DELTA SQR
ARCH. DIGEST	66.4	46.0	61.1	71.4	64.9	
Gourmet	74.0	43.4	42.8	56.0	69.2	
DELTA	-8.6	1.6	8.5	15.4	-4.3	
x	-8.6	1.6	8.5	15.4	-4.3	
DELTA SQUARE	74.0	2.6	72.3	237.2	18.5	• 404

Here's Gourmet - not a bad match - it has a delta square of 404, and we can see that most of the difference is in median household income.

We do the same thing for all 125 magazines, and then rank them - the one with the lowest delta square is the closest match.

That's it - all done - here's the report.

FCB UMPIRE - UNMEASURED MAGAZINE PROFILE SYSTEM

MAGAZINE	DELTA SQUARE	WOMEN	MEDIAN AGE	COL GRAD+	MEDIAN HHI	MARRIED
ARCH. DIGEST		66.4	46.0	61.1	71.4	64.9
Gourmet	404	74.0	43.4	42.8	56.0	69.2
Travel & Leisure	423	67.4	43.4	39.4	66.7	66.7
New Yorker	461	64.6	46.8	66.3	69.8	64.6
Arch. Digest	689	60.0	42.5	62.8	62.3	66.1
Bon Appetit	710	70.7	40.8	37.0	60.0	67.7
Smithsonian	801	60.2	48.2	62.8	48.0	66.1
Psychology Today	804	62.0	40.8	48.2	46.4	63.1
Food & Wine	916	61.9	39.7	31.4	61.2	66.0
Inc.	926	44.8	39.1	46.9	66.6	78.9
Money	1067	41.8	42.3	42.8	62.0	71.8
Fortune	1250	36.6	36.1	40.8	66.7	66.4
Colonial Homes	1401	78.4	44.8	33.7	46.3	62.1
HG	1418	76.7	46.8	36.6	39.9	66.3

If we were trying to find the best single prototype for a new magazine called Architectural Digest, it would be Gourmet. Other upscale shelter books that might be reasonable candidates from an editorial standpoint, such as HG, are not as close a match. In this case, the difference lies in the education and median household income. Notice that Arch Digest, itself, comes in fourth. The subscriber study isn't a prefect reflection of the MRI primary audience, and also, the delta square technique is very sensitive. We will use this later on to help us determine the most predictive demographic.

The last step is to take the top magazines and calculate two-magazine averages. Sometimes, one magazine will be high, another low, but their average closely matches the readership study. Taking Gourmet and New Yorker, for instance, Gourmet's composition for women is 74% and New Yorker's is 55. The average of the two, 65, is a perfect match with Arch Digest. We calculate a delta square for every combination of the top ten magazines taken two at a time. Sort the combinations and print the report.

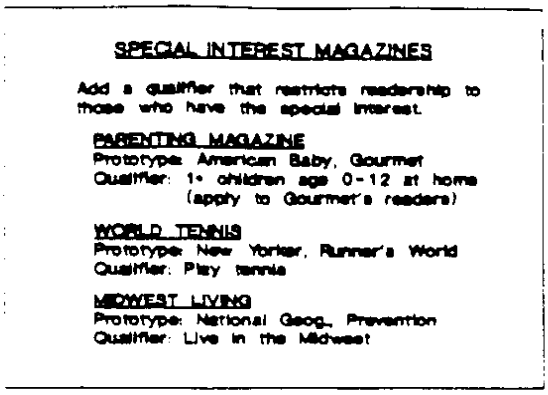
FOR UMPIRE - UNMEASURED MAGAZINE PROFILE SYSTEM

2-MAGAZINE COMBINATIONS		DELTA SQUARE
Gourmet	New Yorker	198
Travel & Leisure	New Yorker	268
New Yorker	Bon Appetit	286
Gourmet	Arch. Digest	330
New Yorker	Food & Wine	338
Gourmet	Travel & Leisure	340
Gourmet	Smithsonian	414
Gourmet	Inc.	419
New Yorker	Psychology Today	480

There are a number of combinations that have a lower delta square than any single magazine alone - remember Gourmet's was 404.

Finally, we use judgment to select the best prototype. I can't stress this enough - UMPIRE is an aid to judgment - as will be apparent in a few minutes, we can't automatically go with the combination that has the lowest delta square - we need to look at the alternatives and selec a prototype that has a low delta square and also is judgmentally appropriate. In this case, the average of Gourmet and New Yorker is quite acceptable, and that is what we would use.

An obvious question is, "What about special interest magazines?" A system that selects prototypes on the basis of demographics alone can produce illogical results: Parenting magazine with too few parents, a sports magazine like World Tennis with too few tennis players, or a regional magazine like Midwest Living with readership in the South.



Since the underlying lifestyle can still be expressed in terms of demographics, we would continue to use them to identify the magazines that most closely match the readership study. But, as necessary, we would add a qualifier to the prototype that restricts the audience to those who participate in the special interest of the unmeasured magazine.

For example, for Parenting, the best demographic match is American Baby and Gourmet. The prototype would be based on the readers of Gourmet who have one or more children at home. American Baby, of course, would not need this qualifier. We would do the same kind of thing for a sports magazine or a regional publication. The only caveat, of course, is that we must chose a large enough prototype so that the sample size is adequate after the qualifier has been applied.

The next step is validation. How well does the total audience profile of the prototype match that of the magazine itself? We used magazines that have a subscriber study that were later measured by MRI. Here are the prototypes that UMPIRE selected and the correlation on 31 demographics.

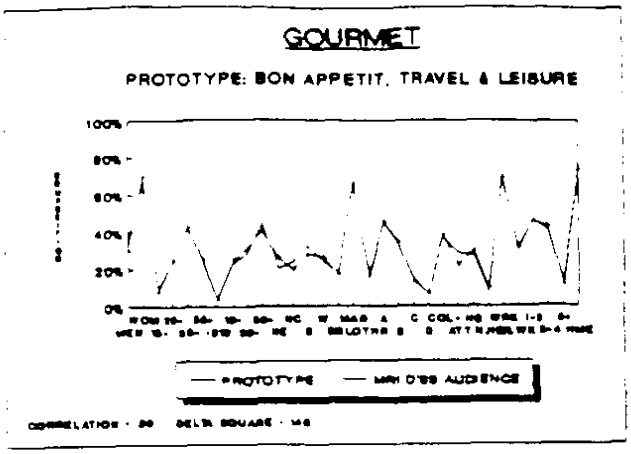
VALIDATION
"UNMEASURED" MAGAZINE VS PROTOTYPE

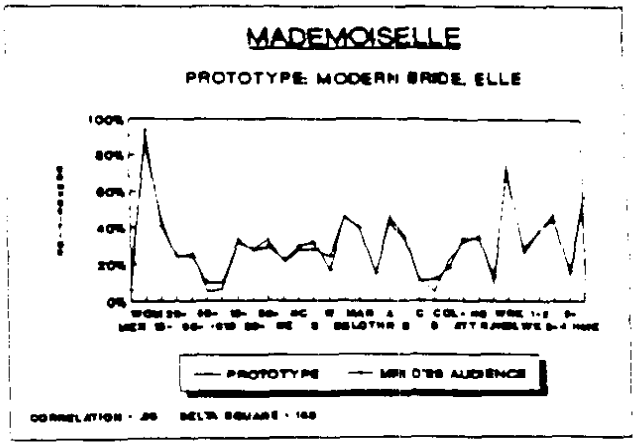
"UNMEASURED"	UMPIRE PROTOTYPE	DEMO CORR.
AMERICAN HEALTH	Weight Watchers / House Beaut	0.97
ARCH. DIGEST	Gourmet / New Yorker	0.97
BON APPETIT	Food & Wine / Harper's Bazaar	0.96
BRIDE'S MAGAZINE	Modern Bride	0.99
COUNTRY LIVING	Creative Ideas / Colonial Home	0.98
DUCKS UNLIMITED	Golf Digest / Wall St. Jrnl	0.86
FLOWER & GARDEN	Country Journal / Prevention	0.94
GOURMET	Bon Appetit / Travel & Leisure	0.99
HEALTH	Family Circle / Sat Eve Post	0.97
HOME OFF CMPTG	US News / Sports Illustrated	0.95
MADEMOISELLE	Modern Bride / Elle	0.98

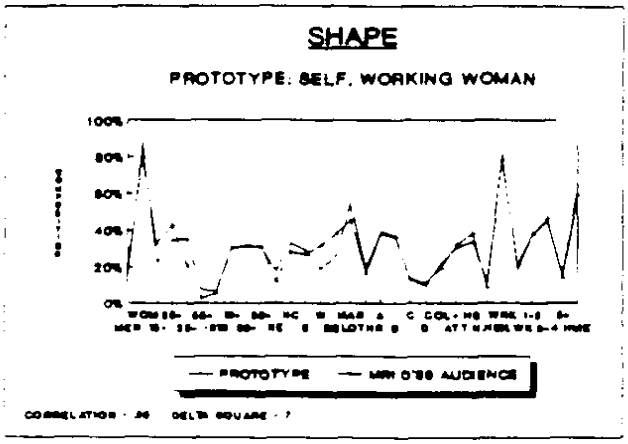
VALIDATION
"UNMEASURED" MAGAZINE VS PROTOTYPE

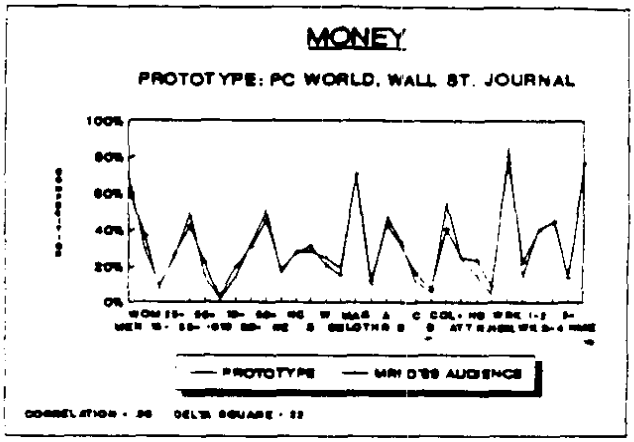
"UNMEASURED"	UMPIRE PROTOTYPE	DEMO CORR.
MONEY	PC World / Wall St. Journal	0.98
MUSCLE & FITNESS	Penthouse / 4 Wheel & Off Road	0.92
PARENTING	American Baby / Gourmet	0.94
PLAYBOY	Scientific Amer / Car & Driver	0.94
SESAME STREET	American Baby / Working Mother	0.97
SHAPE	Self / Working Woman	0.96
STEREO REVIEW	Road & Track / High Fidelity	0.97
WESTWAYS	Audubon / USA Today	0.94
WORKBASKET	Woman's Day	0.92
WORKBENCH	Popular Science	0.94
WORKING MOTHER	Creative Ideas / Working Woman	0.93

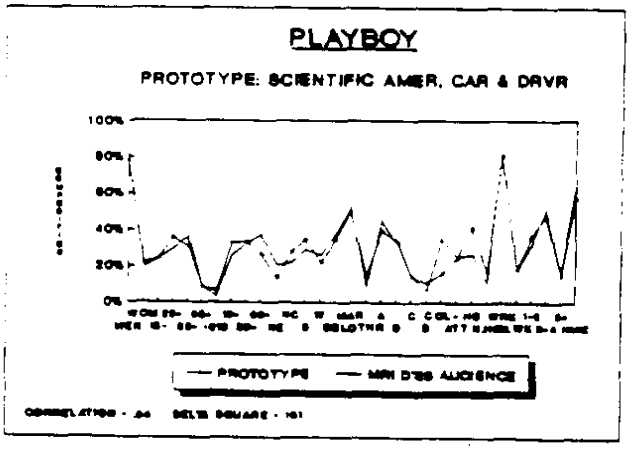
Graphically, here's how this looks for a few of them

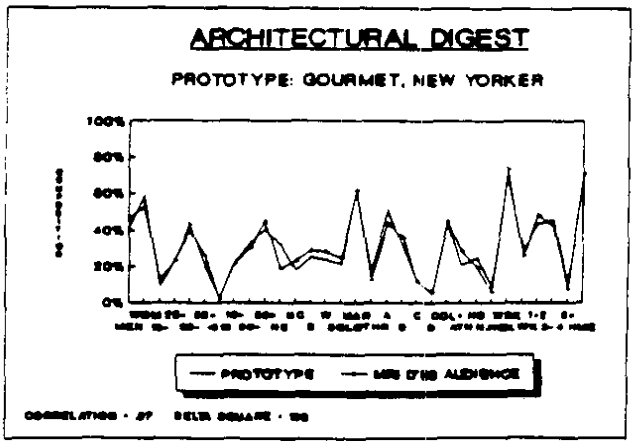




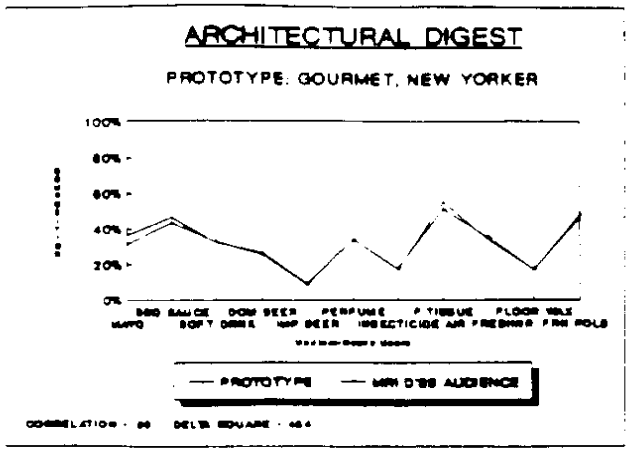


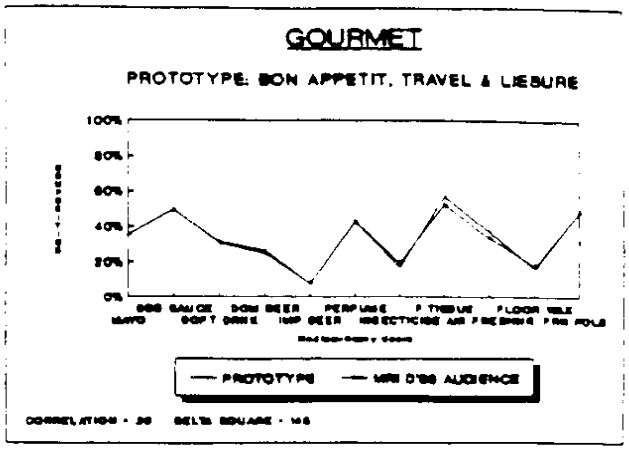


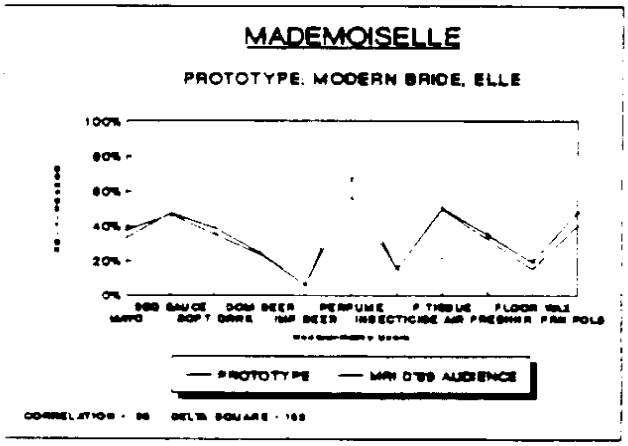


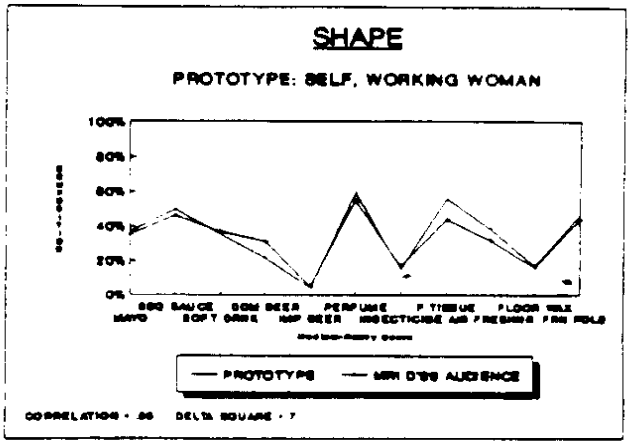


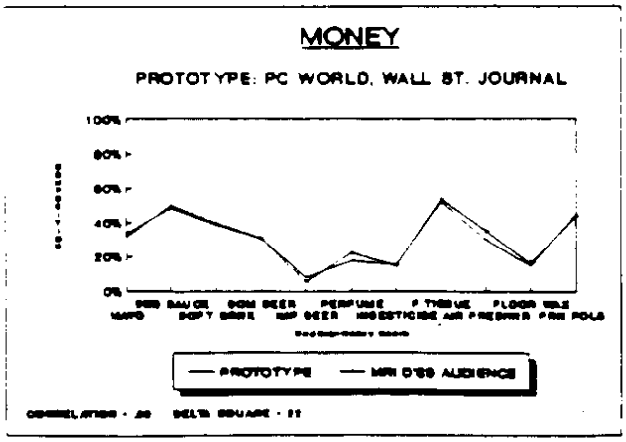
Since most planning is done on the basis of product usage, we compared the prototype with the magazine itself on composition of total adult medium-heavy users of various products. We see the same pattern of exceptionally high correlations. This gave us a great deal of confidence in the validity of the UMPIRE profile matching system.

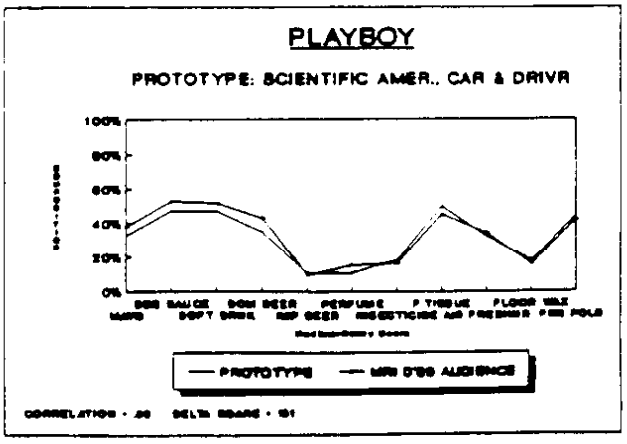












As we got into it, we found that the system was very sensitive to the demographics that were entered. Each set of demo's produced a different magazine with the lowest delta square. We had to identify the most predictive demographic set.

To do this, we went back to the magazines that had an SMRB subscriber study and were later measured by MRI. Comparable data exist on seven demos. We made the assumption that a magazine is its own best prototype. That is, given the readership study of, say, Mademoiselle, the most predictive demographic set is one which selects Mademoiselle as the best prototype - the one with the lowest delta square.

We looked at all possible combinations of the seven demographics taken 1, 2,3,4, and 5 at a time. We recorded the rank at which each magazine "found itself," the earlier the better. A few minutes ago we noted that Arch Digest found itself ranked fourth. Here is another example, American Health.

FCB UMPIRE - UNMEASURED MAGAZINE PROFILE SYSTEM

MAGAZINE	DELTA SQUARE	MEDIAN WOMEN	MEDIAN AGE	COL GRAD+	MEDIAN HHI	MARRIED	
AMERICAN HEALTH		83.2	36.8	42.1	40.8	63.6	
Working Woman	196	86.2	38.4	30.3	37.4	57.2	1
Town & Country	222	74.8	42.3	31.8	39.8	66.1	2
HG (House & Gdn)	269	76.7	40.8	36.5	39.9	66.3	3
Parenting	275	81.2	31.7	39.3	41.3	79.2	4
Bon Appetit	310	70.7	40.8	37.0	60.0	67.7	5
Metropolitn Home	315	71.3	36.4	34.9	46.8	64.1	6
Gourmet	406	74.0	43.4	42.8	66.0	69.2	7
American Health	472	72.7	42.3	25.8	36.8	69.0	8

For this set of demographics, UMPIRE says that American Health is the eighth best prototype of American Health.

UMPIRE thinks that Working Woman is the best prototype. That's wrong. It thinks that Town & Country is second best, and so on. American Health itself, ranks eighth. We did that for every magazine that we had data on

RANKING SUMMARY FOR DEMOGRAPHIC SET:
WOMEN MEDAGE GRAD+ MEDHHI MARRIED

American Health	8
Arch. Digest	4
Bride's Magazine	17
Country Living	7
Ducks Unlimited	18
Flower & Garden	50
Mademoiselle	4
Home Office Computing	1
Metropolitan Home	16
Money	3
Muscle & Fitness	16
Parenting Magazine	21
Playboy	1
Shape	23
Stereo Review	2
Vanity Fair	1
The Workbasket	17
Work Bench	1
Working Mother	2
World Tennis	1
Average	12.1

The average rank for this set of demos: sex, median age, college grad plus, median household income, and married, was 12.1. Some magazines, like Ducks Unlimited, were off in space. Others, like Mademoiselle, Working Mother and Stereo Review were right on.

We repeated the process for for every combination of demos.

ALTERNATIVE DEMOGRAPHIC INPUTS

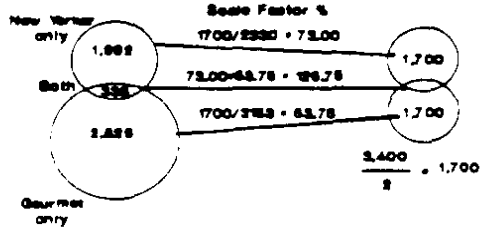
					AVERAGE RANKING
Women	Medage	Grad+	Medhhi	Married	12.1
Women	Medage	Medhhi	Married		13.7
Women	Grad+	Medhhi	Married		14.0
Women	Medhhi	Married			16.8
Women	Medage	WorkFT	Medhhi	Married	17.5
Women	Medage	Afthd	Married		18.2
Women	Medage	Medhhi			19.8
Women	Medage	Grad+	WorkFT	Medhhi	20.1
Women	Grad+	Medhhi			20.7
Women	Medage	WorkFT	Medhhi		23.7
Women	WorkFT	Medhhi			28.6

The one with the lowest average rank was determined to be the most predictive. Here are some examples. For instance, if we used women, median age, and median household income, the average rank was 19.8 - not as good a predictor. In the interest of consistency and accuracy, it's important that the UMPIRE run be based on the five demos at the top.

The final step is to enter the prototype into the computer. Single magazine prototypes are handled routinely by all the systems. Two magazine prototypes are a little more complicated. Our example is based on MRI's MEMRI, although IMS and Telmar are also able to handle two magazine prototypes. SMRB's CHOICES will allow it in future revisions.

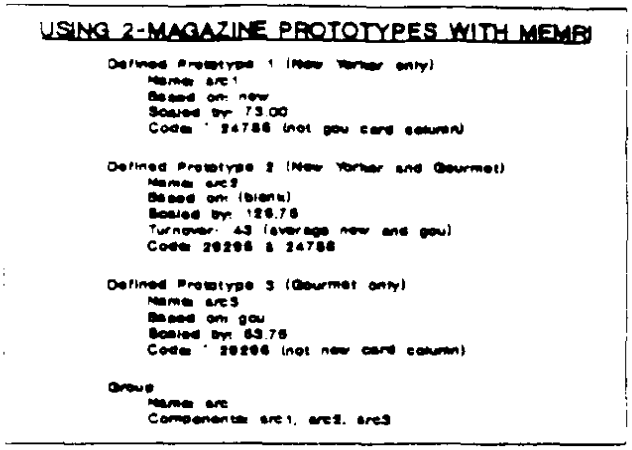
We continue with our example from Arch Digest, prototyped as the average of Gourmet and New Yorker.

USING 2-MAGAZINE PROTOTYPES



First determine the total audience of the unmeasured magazine by multiplying its circulation times the estimated readers-per-copy. This area is still totally judgmental. At FCB we base it on the readership of editorially similar magazines as well as publication frequency, out-of-home distribution, and newsstand sales. In our example, we get 3.4 million readers. Now, divide that in half, giving 1,700,000.

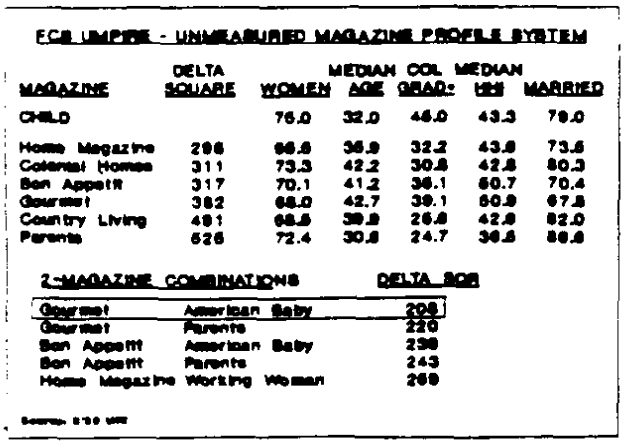
Next, we are going to create three mutually exclusive pieces: readers of Gourmet and not New Yorker, readers of New Yorker and not Gourmet, and readers of both. The scale factor of each component is calculated by dividing 1700 by the component's total audience. 1700 divided by the total audience of New Yorker 2330 equals 73.00% Do the same thing for Gourmet. 1700 divided by 3163 equals 53.75% Now, add the two single magazine scale factors together to get the scale factor for the duplicate segment. 73.00 + 53.75 equals 126.75.



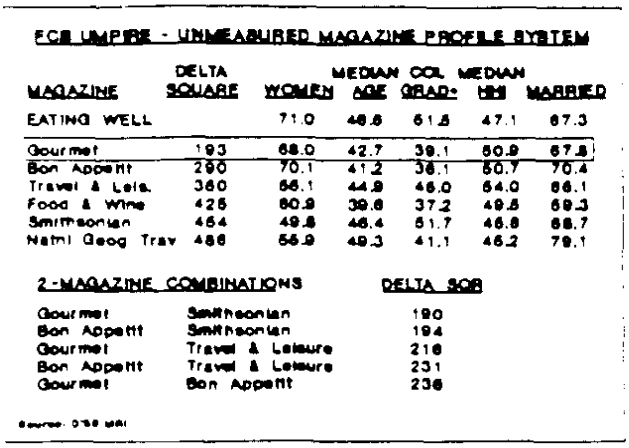
We use the Builder function in MEMRI to create three defined prototypes based on the three mutually exclusive pieces. Note that you have to use the card column punch in the coding section. Turnover of the duplicated segment is the average of the two component's turnovers. Finally, the Group function is used to combine the three pieces into a single prototyp that can be used by the planners.

When it's done this way, the resulting prototype has a composition that is the exact unweighted average of the two components. This matches the way UMPIRE calculated the delta square for the two magazine average - and we're home. The prototype is ready to be used in CPM rankers, optimizations, and reach/frequency runs. Incidentally, by doing it this way the system allows the prototype and its components to be in the same schedule. There is one slight glitch in the current MEMRI program - if you look at a single insertion of one magazine, the reach will be up to 8% less than the gross impressions. This is because of the way the program handles the duplicated segment. Most of the magazines we looked at were in the 3-5% range - not significant in the context of a full schedule - but not perfect. MRI is working on correcting this.

Finally, here are some examples of UMPIRE runs with a few of the current crop of unmeasured magazines. Here's Child Magazine.



It's interesting that UMPIRE gives Child the same prototype as Parenting, an average of Gourmet and American Baby. Again, we would apply the parental qualifier to Gourmet's readers.

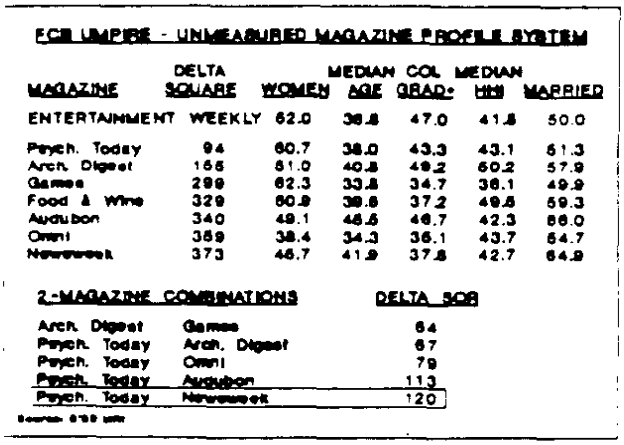


FCB UMPIRE - UNMEASURED MAGAZINE PROFILE SYSTEM

MAGAZINE	DELTA SQUARE	WOMEN	MEDIAN AGE	COL GRAD+	MEDIAN HHI	MARRIED
EATING WELL		71.0	46.6	61.8	47.1	67.3
Gourmet	193	68.0	42.7	39.1	60.9	67.8
Bon Appetit	290	70.1	41.2	36.1	60.7	70.4
Travel & Leis.	360	66.1	44.9	46.0	64.0	66.1
Food & Wine	425	60.9	39.6	37.2	49.5	69.3
Smithsonian	454	49.8	46.4	51.7	46.8	68.7
Natnl Geog Trav	486	56.9	49.3	41.1	46.2	79.1

2-MAGAZINE COMBINATIONS		DELTA SQR
Gourmet	Smithsonian	190
Bon Appetit	Smithsonian	194
Gourmet	Travel & Leisure	216
Bon Appetit	Travel & Leisure	231
Gourmet	Bon Appetit	236

Here's Eating Well. In our judgment, it would be best prototyped by one book, Gourmet, even though the Gourmet Smithsonian combination has a slightly lower delta square.

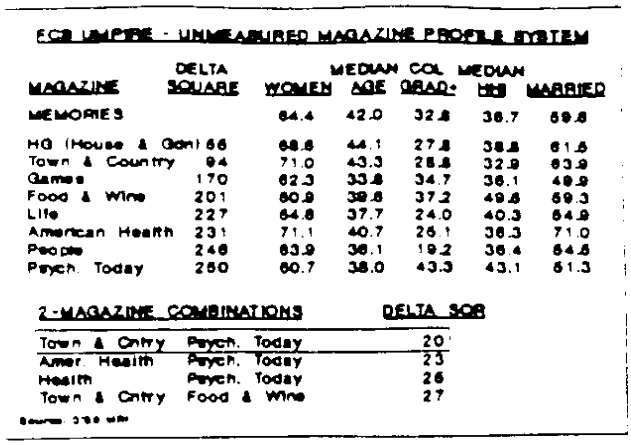


FCB UMPIRE - UNMEASURED MAGAZINE PROFILE SYSTEM

MAGAZINE	DELTA SQUARE	WOMEN	MEDIAN AGE	COL GRAD+	MEDIAN HHI	MARRIED
ENTERTAINMENT WEEKLY		62.0	36.6	47.0	41.6	50.0
Psych. Today	94	60.7	38.0	43.3	43.1	61.3
Arch. Digest	166	61.0	40.6	49.2	60.2	57.9
Games	299	62.3	33.6	34.7	36.1	49.9
Food & Wine	329	60.9	39.6	37.2	49.6	69.3
Audubon	340	49.1	46.6	46.7	42.3	66.0
Omni	369	38.4	34.3	36.1	43.7	64.7
Newsweek	373	46.7	41.9	37.6	42.7	64.9

2-MAGAZINE COMBINATIONS		DELTA SQR
Arch. Digest	Games	64
Psych. Today	Arch. Digest	67
Psych. Today	Omni	79
Psych. Today	Audubon	113
Psych. Today	Newsweek	120

The readership study of Entertainment Weekly presents the magazine as an upscale publication, best prototyped by Psychology Today or Arch Digest. In our judgment, the average of Psychology Today and Newsweek reflects that, but also broadens the profile and adds the characteristics of a weekly magazine.

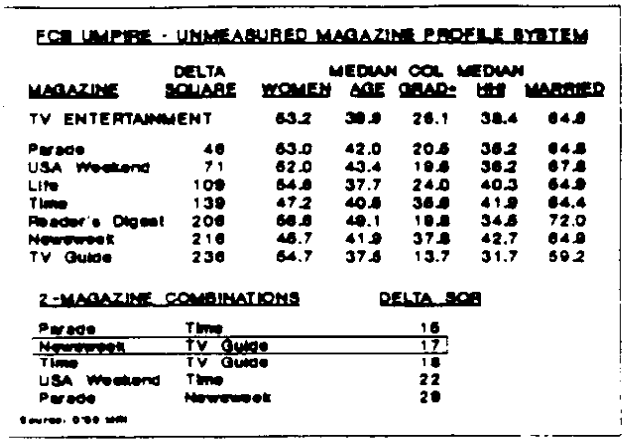


FCB UMPIRE - UNMEASURED MAGAZINE PROFILE SYSTEM

MAGAZINE	DELTA SQUARE	MEDIAN WOMEN	MEDIAN AGE	COL MEDIAN GRAD+	MEDIAN HHI	MEDIAN MARRIED
MEMORIES		64.4	42.0	32.8	36.7	59.8
HG (House & Gar	66	68.6	44.1	27.8	38.8	61.6
Town & Country	84	71.0	43.3	28.8	32.9	63.9
Games	170	62.3	33.8	34.7	36.1	49.9
Food & Wine	201	60.9	38.6	37.2	49.8	59.3
Life	227	64.8	37.7	24.0	40.3	64.9
American Health	231	71.1	40.7	26.1	36.3	71.0
People	246	63.9	36.1	19.2	36.4	64.6
Psych. Today	250	60.7	38.0	43.3	43.1	61.3

2-MAGAZINE COMBINATIONS		DELTA SQR
Town & Cntry	Psych. Today	20
Amer. Health	Psych. Today	23
Health	Psych. Today	26
Town & Cntry	Food & Wine	27

Memories is an innovative new magazine that might be prototyped by Life or People. On the other hand, an average of Town and Country and Psychology Today is almost a perfect fit.

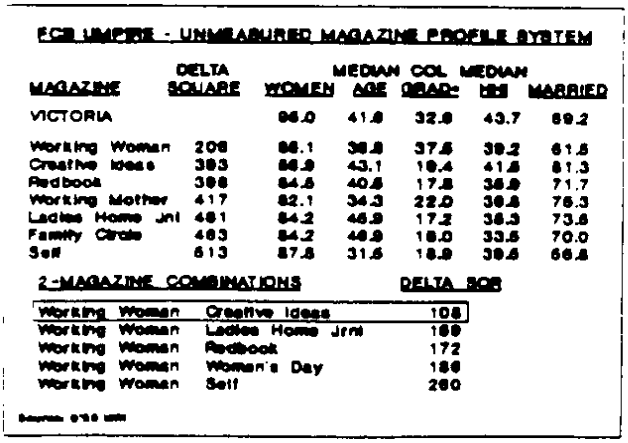


FCB UMPIRE - UNMEASURED MAGAZINE PROFILE SYSTEM

MAGAZINE	DELTA SQUARE	MEDIAN WOMEN	MEDIAN AGE	COL MEDIAN GRAD+	MEDIAN HHI	MEDIAN MARRIED
TV ENTERTAINMENT		63.2	38.9	26.1	38.4	64.8
Parade	46	63.0	42.0	20.5	36.2	64.8
USA Weekend	71	62.0	43.4	19.8	36.2	67.8
Life	109	64.8	37.7	24.0	40.3	64.9
Time	139	47.2	40.8	36.8	41.9	64.4
Reader's Digest	206	66.8	49.1	19.8	34.6	72.0
Newsweek	216	46.7	41.9	37.8	42.7	64.8
TV Guide	236	64.7	37.6	13.7	31.7	59.2

2-MAGAZINE COMBINATIONS		DELTA SQR
Parade	Time	16
Newsweek	TV Guide	17
Time	TV Guide	18
USA Weekend	Time	22
Parade	Newsweek	29

Here is the run for TV Entertainment. TV Guide alone would be reasonable, but the distribution to cable households makes the profile more upscale. The average of Newsweek and TV Guide readers (in cable homes) is right on, and is judgmentally a better fit than Time and Parade.

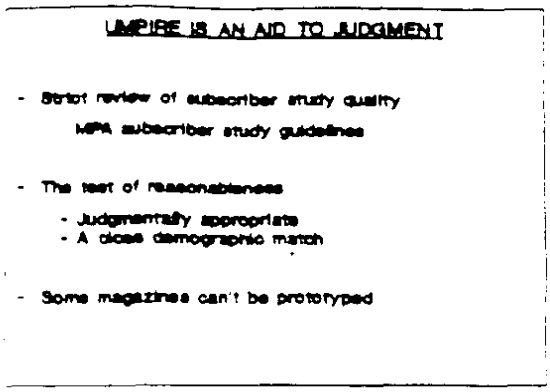


FCB UMPIRE - UNMEASURED MAGAZINE PROFILE SYSTEM

MAGAZINE	DELTA SQUARE	MEDIAN WOMEN	MEDIAN AGE	COL MEDIAN GRAD+	MEDIAN HHI	MEDIAN MARRIED
VICTORIA		86.0	41.8	32.8	43.7	69.2
Working Woman	208	86.1	38.8	37.6	39.2	61.6
Creative Ideas	383	86.9	43.1	18.4	41.6	61.3
Redbook	398	84.6	40.6	17.8	36.9	71.7
Working Mother	417	82.1	34.3	22.0	39.6	76.3
Ladies Home Jnl	481	84.2	46.9	17.2	36.3	73.6
Family Circle	483	84.2	46.9	16.0	33.6	70.0
Self	613	87.6	31.6	18.9	39.6	66.6

2-MAGAZINE COMBINATIONS		DELTA SQR
Working Woman	Creative Ideas	108
Working Woman	Ladies Home Jrnl	169
Working Woman	Redbook	172
Working Woman	Woman's Day	186
Working Woman	Self	280

Victoria is another magazine that has a unique style - it's hard to find an exact editorial match. UMPIRE suggests an average of Working Woman and Creative Ideas. We would go with that.



Finally, let me again emphasize that UMPIRE is an aid to judgment. This means, first, that we are going to have to be more critical than ever of the quality of subscriber studies. In the past, they were used mostly as advisory documents. With UMPIRE, they have a direct input into the selection of the prototype. In order to be used with confidence, they must comply with the MPA guidelines regarding response rate, independent research, reporting standards, and differential handling of newsstand versus subscription readership.

UMPIRE's selections, like any computer analysis, must meet the test of reasonableness. Just as we do not place the entire media budget in the magazine with the lowest CPM, so we do not automatically use the magazine or combination with the lowest delta square. The recommended prototype must be both judgmentally appropriate and a close demographic match.

Finally, some magazines simply can't be prototyped. For example, "W" is a bi-weekly newspaper for professional women. Its readers have an exceptionally high median household income of $95,000 and education level - 60% are college grad or above. The UMPIRE analysis shows that the closest match is Gourmet, but the delta square is over 3,000. We would conclude that there is no appropriate prototype in syndicated research. "W" would be better handled as a judgmental addition to the media plan.

Where do we go from here? FCB is working with the various research suppliers to make UMPIRE available on their systems. With the numerical UMPIRE analysis, media researchers can, for the first time, make an informed judgment of which magazine or group of magazines is the best prototype. A good intuitive match is still important, but now the decision can be made in the objective context of the lowest delta-square.

Thank you for your attention.

People who have seen this presentation frequently ask about the effect of using a prototype on duplication. How does the net reach of a schedule using the prototype compare to that of a schedule using the magazine itself? To answer this, we created schedules with 1,2,5, and 10 insertions in each of 16 magazines. These were combined with a like number of insertions in seven reference publications that were chosen to be representative of widely differing readerships: Good Housekeeping, Reader's Digest, Family Circle, Business Week, Penthouse, New Yorker, and True Story. A total of 448 schedule pairs were analyzed. Here is an example of one of them.

DUPLICATION
(Sample comparison)

	SCHEDULE A	SCHEDULE B
GOOD HOUSEKEEPING	1	1
AMERICAN HEALTH (magazine)	1	
AMERICAN HEALTH (prototype)		1
Insertions	2	2
GRPs (adults 18+)	17.4	17.4
REACH (1+)	15.8	16.2 (+2.5%)

We found that the average schedule with the prototype gave 3.15% more reach than did the schedule with the magazine itself. The difference was less for single insertion schedules, more for schedules with ten insertions in each magazine. The difference was greater than 10% for 17 of the 448 schedule pairs. These tended to be magazines that appeal to a narrow group (such as the men's magazines) where a demographically selected prototype does not reflect the high duplication that is normally found.