

## 7.3

## NOT LOSING SIGHT OF THE FOREST

### INTRODUCTION

Most media research information in India is disseminated in formats which essentially enable comparisons of one vehicle with another for the population or for some demographic or socio-economic class. A typical table in the National Readership Survey is shown, as Table 1.

In addition, at best, there would be a few more tables giving frequency of readership and duplication between pairs of publications.

We believe that this approach to dissemination and use of readership information implicitly reduces the media planning function in an advertising agency to one of tactical planning

and scheduling, ie selecting the most cost effective vehicles for reaching a target group. Availability of computer hardware and software resources and access to raw data is also resulting in a usage pattern which is only slightly different from the one using the published reports. Planners now define their target groups a bit more specifically in terms of demographic, socio-economic and product usage dimensions and, for these target groups, extract average issue readership for publications and order them in terms of their cost effectiveness.

Some media planners and researchers have been concerned that because of the time and attention devoted to tactical scheduling, we may be losing our strategic perspective: because twigs, branches and trees loom in the foreground we may have lost sight of the forest!

Table 1

#### Readership by education

	Total		Below SSC		SSC & above but not graduate		Graduate and above	
	No	%	No	%	No	%	No	%
Unweighted sample	1,772		812		479		147	
Est Adults (000's)	2,945	100	1,357	100	806	100	240	100
English dailies								
Hindu	564	19.2	66	4.8	317	39.3	182	76.0
Indian Express	207	7.0	19	1.4	112	13.9	77	32.0
Any English daily	643	21.8	78	5.7	361	44.8	204	85.1

We therefore asked ourselves a few questions:

(a) Should we not consider for media research, methodologies and tools (particularly those of multivariate analysis) which are used in other forms of research?

(b) Would not media consumption like other forms of consumer behaviour, manifest itself in a finite set of behavioural patterns?

(c) Would people with different behavioural patterns also be different in terms of demographics or product usage?

(d) Can media planners examine these behavioural patterns, profiles of these audiences, and develop strategies for reaching them?

(e) Can publishers segment the market based on these behavioural patterns and evaluate their publications in each segment and even consider this segmentation when introducing new publications?

Some preliminary work that we had done a year ago made us believe that segmentation based on readership habits of various publications was possible. With faith that it could be done

and used meaningfully we embarked on this project. This paper does not attempt to prove or disprove any hypotheses nor is it an experimental study. It attempts to illustrate that indeed segmentation based on readership habits is possible and that it can be of use to both advertisers and publishers.

At the first stage, the paper focuses on the behavioural patterns observed based on NRS III data in three different cities in India. It examines how these behavioural patterns were translated into clusters and segments and the differences between the clusters and segments in terms of demographic, socio-economic and product usage parameters.

In the second stage, the focus is on how this segmentation could be used meaningfully by both media planners and publishers; the approach used to demonstrate this is that of a case study.

### FORMING CLUSTERS BASED ON READERSHIP BEHAVIOUR

For this analysis three separate data sets were taken up. These are briefly described in Table 2.

**Table 2**

#### Data sets included in analysis

	Bombay	Madras	Ahmedabad
Adult population as per NRS III (in '000s)	5,862	2,945	1,721
Sample size	2,654	1,772	1,420
Number of publications included in analysis	44	30	24
Minimum readership criteria for including publications %	2.5	2.2	2.2

The first stage analysis, for each data set, involved factor analysis using reading frequency data for each publication. Based on this, groups of publications with high factor loadings on a particular factor, to the exclusion of other factors, were identified.

Tables 3 summarises the results of the factor analysis for the three data sets.

Appendix I shows, by data set, the publications in each factor and a descriptive title based on the common elements between these publications. Essentially, one or more of three common elements were observed among the publications grouping together. These were:

- language of the publication
- editorial content
- writing style (eg highbrow).

For example, in Bombay, five cinema-related magazines grouped together:

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#### Cinema magazines

Filmfare	(English)
Star & Style	(English)
Cine Blitz	(English)
Madhuri	(Hindi)
Filmi Kaliyan	(Hindi)

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In addition, across the three data sets, some common or similar groups of publications were also observed. For example, *India Today* and *Reader's Digest*, two major general interest English publications, consistently emerged in the same group across the three data sets: Bombay, Ahmedabad and Madras. Similarly a 'cinema magazines' group emerged in each of the three data sets.

**Table 3**

#### Factor analysis summary

	Bombay	Madras	Ahmedabad
Sample size	2,654	1,772	1,420
No of publications	44	30	24
Factoring method	Principal component analysis	Principal component analysis	Principal component analysis
Rotation method	Varimax	Varimax	Varimax
No of factors	9	6	7
Variance explained by factor solution %	54.6%	50.1%	53.0%

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Based on reading frequency data we identified for each respondent the number of groups for which the respondent had some probability of reading. This analysis is shown in Table 4.

It is significant that, in Bombay and Ahmedabad, 50% or more respondents read publications from only one or two groups and, even in Madras, which has a high readership habit, 56% read publications from up to three groups.

The second stage analysis focused on assigning individuals in the sample to a particular group or cluster based on their readership habits. The assigning of individuals to clusters was not done through a typical cluster analysis procedure but through a deterministic procedure, as follows:

(a) Based on reading frequency data, reading probabilities were computed for each individual, for each publication.

(b) These were then aggregated for a group across all the publications in the group. This parameter was then divided by the number of publications in the group.

(c) The resulting parameter may be interpreted as the average probability of reading any publication in the group.

(d) The individual was then assigned to the cluster for which this parameter was the highest.

In Ahmedabad, it was observed that one publication, *Gujarat Samachar*, the leading daily newspaper, constituted a cluster by itself with a very high readership base. Therefore the concept of primary and secondary cluster membership was introduced: primary being the first cluster that the person is assigned to and secondary being the cluster for which the parameter mentioned above was next highest.

**Table 4**

Number of groups	Bombay %	Ahmedabad %	Madras %
1	35	26	16
2	22	24	20
3	16	21	20
4	13	15	21
5 or more	14	14	23
	100	100	100

Appendix II shows in detail the results of the cluster analysis and some salient differences in the profiles of the primary clusters in demographic, socio-economic and product usage terms.

There are indeed quite significant differences across the clusters. Some of the more dramatic ones observed in Bombay and Madras are highlighted in Table 5.

## CASE STUDY I

This case involved analysis of the data in the context of developing a media plan. This analysis was then discussed in detail with media planners to ascertain how useful it is from their perspective.

The product and target group for which the analysis was done is detailed below:

### Product:

A new brand of shampoo to be test marketed in Bombay.

Table 5

	Bombay		Madras	
	Downmarket Marathi	Upmarket City Orientated	Leading English	Political
Population ('000s)	370	77	235	294
	%	%	%	%
Monthly household income 2,501 +	7	45	21	6
Women readers	19	48	30	22
Graduate and above	3	51	41	5
Shampoo users	1	34	49	16
Car owners	-	24	16	5

**Target group:**

Men and women in the 15 to 44 years age group with a monthly household income greater than Rs.1,500; preferably shampoo users. Using the clusters defined earlier for Bombay, the following additional analyses were done:

(a) With the above target group definition, we estimated the size of the target group in each cluster and an index was computed similar to the Target Group Index (TGI).

(b) We then estimated the average issue readership for each publication in the cluster among the individuals in the target group.

(c) A cross tabulation was run between primary and secondary cluster membership.

These analyses are shown in Appendix III.

These analyses were then examined in detail by a panel of media planners to elicit responses as to how this analysis would help them and if it

was indeed a different and more strategic way of looking at the NRS data. Their views and how they would use the data are summarised below.

(1) Media planners with years of experience in examining data have a 'feel' for the sort of publications which would cluster together – this analysis adds empirical validity to judgment as well as helping to re-examine certain assumptions.

(2) The target group analysis clearly indicates which clusters should be considered for media planning and, leading from that, which sets of publications should one select from if the strategy is to build reach or to build OTS.

For example, in the above case, the indices for Clusters I, IV, VIII and IX are clearly higher than for the other clusters (Table 6).

(3) If the advertising budget is limited, as most budgets often are, one can consider a media domination strategy in a segment of the market. Analysis such as this clearly identifies which

**Table 6**

	Target Group Index*
Cluster I	325
II	25
III	75
IV	285
V	7
VI	107
VII	12
VIII	369
IX	194

\* men and women, shampoo users,  
15 - 44 years, MHI Rs.1501 +

segments to select for such a strategy, and for those segments which publications are more appropriate.

For example, Clusters I and VIII collectively reach over 40% of the target audience (Table 7).

(4) There are differences in editorial content and quality of reproduction between publications in one cluster and those in another. The media planner can with this analysis identify the clusters/segments for greater synergy with the creative component of advertising.

(5) The fact that as many as 50% of the readers in Bombay read publications from only one or two groups came as a bit of a revelation. This would be a very useful input if the objective is to build up OTS for a specific target group.

(6) The sequence of analysis indicates considerable scope for the media planner to interact with the data. Most planners expressed this view particularly when it was explained to them that all the analysis was done on a PC/AT with standard statistical data analysis software.

**Table 7****Extract from Appendix III**

	Nos (‘000s)	% down	% across	Index
Total	271	100.0	6.7	100
Cluster I	90	33.2	21.8	325
Cluster VIII	19	7.0	24.7	369
Cluster I + Cluster VIII	109	40.2	22.3	333

## CASE STUDY II

This case involved assessment of the potential size of the reader universe for a new Gujarati evening newspaper in Bombay City.

This analysis exercise was done over and above other research which the publishing company planned to do.

The exercise was relatively straightforward, the objective being to identify those clusters/segments from the analysis done earlier which would be considered as potential and subsequently to refine the estimate based on a pre-decided target definition. At the first level the potential clusters were defined as:

- (a) Primary members of Cluster III (popular Gujarati publications).
- (b) Primary members of Cluster IV (the second paper – most of these being afternoon/evening papers) who are secondary members of Cluster III.
- (c) Primary members of Cluster I (popular English publications) who are secondary members of Cluster III.

The three segments respectively gave a potential reader estimate of: (a) 623,800; (b) 32,200; (c) 13,400, totalling to 669,400.

Further, given that this was to be an evening paper, the publisher defined his target group as 'men' in the Rs.1,501+ income group. In the three segments mentioned above, the proportion of readers meeting this definition is:

	Nos ('000s)	% meeting target definition
Segment (a)	623.8	23.5
(b)	32.2	36.0
(c)	13.4	14.4

This resulted in a potential target group estimate of 160,400.

As a first level analysis it was quite indicative of the size of market. Further, it proved to be a useful way of defining respondents for other stages of both qualitative and quantitative research.

## CONCLUSION

Since the objective of this paper is to demonstrate that there is considerable scope for using media data bases in a more strategic way by drawing on tools and techniques commonly used in consumer reach, we feel the objective has been met.

In India there has been a tendency to use media survey reports and data as mere 'fact books'; perhaps this tendency was reinforced during the last two decades due to the high cost of computer time magnified further by the size of the data bases – NRS III had a sample size of over 50,000. Now, with the ready access to personal computers with large disk capacities and easy-to-use software we see a definite change on the horizon – a more analytical perspective to data bases. We do hope that this paper and more illustrative cases will be instrumental in bringing about this change.

## References

- Santini, Gilles (1983). Clustering techniques. Montreal Proceedings.
- Quatresooz, Jean (1981). From product usage data to a description of the readers in lifestyle terms. New Orleans Proceedings.

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**APPENDIX I**
**Groups of publications based on factor analysis****BOMBAY****Group I : Leading English publications**

*Times of India*  
*Illustrated Weekly*  
*India Today*  
*Eve's Weekly*  
*Femina*  
*Mirror*  
*Reader's Digest*  
*Science Today*

**Group II : Popular Marathi publications**

*Maharashtra Times*  
*Loksatta*  
*Lokprablia*  
*Shree*  
*Rasrang*  
*Loksatta (Sunday Edition)*  
*Kridangan*

**Group III: Popular Gujarati publications**

*Bombay Samachar*  
*Janmablioomi*  
*Ianmabhoomi Pravasi*  
*Aaspas*  
*Chitralketha*  
*Pravasi*  
*Jee*  
*Sandesh Saptalhiki*

**Group IV: The second paper**

*Indian Express*  
*Evening News*  
*Midday*  
*Sunday Midday*

**Group V: Downmarket Marathi publications**

*Navakal*  
*Sakal*  
*Sandhyakal*

**Group VI: Cinema magazines**

*Filmfare*  
*Star & Style*  
*Cine Blitz*  
*Madhuri*  
*Filmi Kaliyan*

**Group VII: Leading Hindi publications**

*Navbharat Times*  
*Mayapuri*  
*Satyakatha*  
*Chandamama (Hindi)*

**Group VIII: Upmarket city orientated magazines**

*Bombay*  
*Society*  
*Movie*

**Group IX: Children's magazine**

*Chandamama (English)*



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**APPENDIX I (Continued)**
**Groups of publications based on factor analysis****AHMEDABAD****Group I: High cinema orientation**

*Stardust*  
*Filmfare*  
*Chitralekha*  
*Janasatta*  
*Jee*  
*Chitralok*  
*Aaspas*

Gujarati, English and Hindi publications which are mainly film based (except for *Janasatta* and *Chitralekha*)

**Group II : Leading English publications**

*Times of India*  
*India Today*  
*Reader's Digest*

**Group III: Short stories**

*Dharma Sandesh*  
*Phulwadi*  
*Rang Tarang*  
*Charidamama*  
*Chandani*

Gujarati publications with a religious slant and publications with short stories

**Group IV: The second paper**

*Sandesh*  
*Sandesh Saptahiki*

**Group V: Short stories (Hindi)**

*Manhar Katianiyan*  
*Satyakatha*

Hindi publications consisting of short stories

**Group VI : Main daily newspaper**

*Gujarat Samachar*

**Group VII : Women's publications**

*Shree*  
*Stree*

Gujarati publications mainly aimed at women

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**APPENDIX I (Continued)**
**Groups of publications based on factor analysis****MADRAS****Group I: Leading English publications**

*Hindu*  
*Indian Express*  
*Illustrated Weekly*  
*Sunday*  
*India Today*  
*Competition Success Review*  
*Mirror*  
*Reader's Digest*

English publications which are read by more educated, affluent people

**Group II: Upmarket general interest magazines**

*Dinamani Kadi*  
*Kalki*  
*Thuglak*  
*Mutharam*  
*Ananda Vikatan*  
*Idayam Pesukirathu*  
*Kumudam*  
*Kumkumam*  
*Savi*

Mainly general interest magazines

**Group III: Downmarket publications**

*Daily Thanthi*  
*Rani Muthu*  
*Ambulimama*  
*Rani Weekly*

Newspapers and story based magazine which are essentially downmarket publications aimed at the masses (large circulation)

**Group IV: Specialist publications**

*Gnana Boormi* (Religious)  
*Mangai*  
*Mangaiyar Malar*

Women orientated magazines

**Group V: Political**

*Dinakaran*  
*Dinamani*  
*Malai Murasu*

Newspapers with a high political slant

**Group VI : Cinema publications**

*Gemini Cinema*  
*Cinema Express*  
*Bomma*

## APPENDIX II

## Profile of primary cluster members

## Bombay

Cluster:	I	II	III	IV	V	VI	VII	VIII	IX
Total population (in '000s)	412	1,129	624	319	370	332	636	77	154
	%	%	%	%	%	%	%	%	%
MONTHLY HOUSEHOLD INCOME									
Rs. 1,501 +	66	21	40	59	10	39	25	815	50
Rs. 2,501 +	34	71	7	26	7	18	11	45	28
SEX									
Male	57	59	56	69	81	64	79	52	59
AGE									
15 - 24 years	26	30	30	25	18	43	32	25	37
15 - 34 years	54	61	56	54	54	80	65	61	50
EDUCATION									
Graduate or above	38	2	12	30	3	17	6	51	29
PRODUCT USERSHIP/OWNERSHIP									
Shampoo	35	7	13	32	1	10	8	34	23
Shaving system/cartridge	23	8	12	21	7	11	6	18	14
Wristwatch	85	55	64	90	55	76	66	85	84
Mixer	69	21	47	72	3	36	14	75	61
Washing machine	5	1	3	2	-	1	*	11	1
Car	14	2	10	15	-	6	2	24	12

## APPENDIX II (continued)

## Profile of primary cluster members

## Ahmedabad

Cluster	I	II	III	IV	V	VI	VII
Total population (in '000s)	59	41	33	120	27	721	17
	%	%	%	%	%	%	%
MONTHLY HOUSEHOLD INCOME							
Rs. 1,501 +	9	69	3	18	22	27	14
Rs. 2,501 +	3	45	3	7	5	11	14
SEX							
Male	66	79	48	66	58	68	42
AGE							
15 - 24 years	50	34	24	41	12	30	8
15 - 34 years	73	75	56	70	56	58	80
EDUCATION							
Graduate or above	-	50	-	12	29	15	30
PRODUCT USERSHIP/OWNERSHIP							
Shampoo	2	50	-	7	20	8	8
Shaving system/(cartridge	-	16	-	2	4	3	8
Wristwatch	50	93	54	58	70	6	73
Mixer	4	56	8	22	8	27	33
Washing machine	-	2	-	-	-	2	-
Car	-	27	-	1	-	4	-

## APPENDIX II (Continued)

## Profile of primary cluster members

## Madras

Cluster	I	II	III	VI	V	VI
Total population (in '000s)	235	373	900	80	294	183
	%	%	%	%	%	%
MONTHLY HOUSEHOLD INCOME						
Rs. 1,501 +	50	23	6	35	13	15
Rs. 2,501 +	21	10	2	12	6	5
SEX						
Male	70	58	56	46	78	65
AGE						
15 – 24 years	27	28	40	21	22	59
15 – 34 years	55	60	67	44	48	85
EDUCATION						
Graduate or above	41	21	2	19	5	11
PRODUCT USERSHIP/OWNERSHIP						
Shampoo	49	35	15	31	15	35
Shaving system/cartridge	18	7	6	-	5	5
Wristwatch	85	68	51	66	61	67
Mixer	68	33	10	43	16	14
Washing machine	4	*	1	2	1	-
Car	16	8	2	6	5	3

## APPENDIX III

## Special analysis for developing a media plan

## Bombay

	Total population (in '000s)	Target Group 'A' Men & Women 15 to 44 years MHI: Rs. 1501 +				Target Group 'B' Men & Women, Shampoo Users 15 to 44 years MHI: Rs. 1501 +			
		Nos (in '000s)	% down	% across	Index	Nos (in '000s)	% down	% across	Index
Total	4,054	1,026	100.0	25.3	100	271	100.0	6.7	100
Primary clusters									
I	412	193	18.8	46.8	185	90	3.2	21.8	325
II	1,129	141	13.7	12.5	49	19	7.0	1.7	25
III	624	184	17.9	29.5	117	31	11.4	5.0	75
IV	319	137	13.4	42.9	169	61	22.5	19.1	285
V	370	30	2.9	8.1	32	2	0.8	0.5	7
VI	332	115	11.2	34.6	137	24	8.9	7.2	107
VII	636	128	12.5	20.1	79	5	1.8	0.8	12
VIII	77	51	5.0	66.2	262	19	7.0	24.7	369
IX	154	47	4.6	30.5	121	20	7.4	13.0	194

## APPENDIX III (Continued)

## Bombay

## Readership of publications in specific clusters

	Among primary cluster members			Among primary cluster members	
	Target Group 'A' %	Target Group 'B' %		Target Group 'A' %	Target Group 'B' %
<b>Cluster I</b>			<b>Cluster V</b>		
Times of India	82.8	81.5	Navakal	6.1	100.0
Illustrated Weekly	29.8	40.4	Sakal	31.7	-
India Today	43.5	57.5	Sandhyakal	29.7	-
Eve's Weekly	19.7	30.2			
Femina	26.6	37.0	<b>Cluster VI</b>		
Mirror	20.6	28.4	Fiimfare	39.3	55.4
Reader's Digest	38.0	41.7	Star & Style	29.2	55.4
Science Today	21.1	22.6	Cine Blitz	29.3	56.4
			Madhuri	27.3	4.7
<b>Cluster II</b>			Filmi Kaliyan	35.8	18.9
Maharashtra Times	41.1	66.7			
Loksatta	61.1	66.7	<b>Cluster VII</b>		
Lokprabha	18.1	33.3	Navbharat Times	65.4	-
Shree	29.6	56.7	Mayapuri	16.8	50.0
Rasrang	16.8	47.2	Satyakatlia	13.9	-
Chandoba	30.5	46.8	Chandamama (Hindi)	9.7	-
Loksatta Sunday	64.6	71.0			
Kridangan	7.7	-	<b>Cluster VIII</b>		
			Bombay	58.2	48.6
<b>Cluster III</b>			Society	55.0	86.2
Bombay Samachar	83.2	88.3	Movie	57.2	67.2
Janmabhoomi	37.6	22.5			
Janmabhoomi Pravasi	32.4	35.5	<b>Cluster IX</b>		
Aaspas	22.0	38.0	Chandamama (English)	56.2	59.4
Chitralkha	59.0	70.7			
Pravasi	45.7	62.3			
Jee	27.4	44.7			
Sandesh Saptahiki	29.8	44.4			
<b>Cluster IV</b>					
Indian Express	45.1	45.1			
Eveninig News	28.4	26.5			
Midday	45.9	47.5			
Sunday Midday	54.3	59.0			

## APPENDIX III (Continued)

## Bombay

## Cross tabulation of primary and secondary cluster membership

	Percent of primary cluster members who are secondary cluster members of .....								
	I	II	III	IV	V	VI	VII	VIII	IX
Total population (in '000s)	412	1,129	624	319	370	332	636	77	154
No secondary cluster	30.2	47.5	61.4	7.7	14.8	9.7	42.4	-	-
I	-	5.4	10.6	43.7	0.7	14.4	5.2	54.5	44.8
II	7.7	-	1.0	7.2	69.9	28.2	13.8	6.4	10.1
III	3.3	0.8	-	10.1	-	13.5	4.7	5.4	2.9
IV	15.3	2.4	8.2	-	2.1	8.8	4.9	19.7	19.9
V	0.5	20.2	-	0.7	-	7.6	8.2	-	1.3
VI	21.0	10.8	9.2	14.4	3.0	-	17.6	6.0	6.4
VII	2.4	10.1	8.4	3.8	8.8	8.3	-	2.4	8.1
VIII	16.4	1.9	-	7.5	-	3.5	0.7	-	6.5
IX	3.2	0.9	1.2	4.9	0.7	6.0	2.5	5.6	-