

REINCARNATING TAM PANELISTS TO UNDERSTAND CHANNEL SURFING

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This paper records a continuation in a series of studies launched to appreciate TAM ratings in a holistic manner. Pure quantitative or qualitative studies often stop short of giving the user a complete understanding of viewing behavior, especially when it comes to complex behavior such as channel surfing. This paper uses a unique approach to tackle this problem. It does this by requesting ex-panelists to be part of an observation and depth-interview study. The panelists, of course, were at some time yielding minute-minute TAM data, so information gained at this stage yields rich explanatory insights to the behavior when they were on the panel. In effect, we generated a quasi-single source of information that can potentially change the way audiences are defined and targeted.

BACKGROUND

The Indian television scenario is active as never before. TAM India today reports on close to 300 channels, an increase of 82 channels as compared to 2002. Importantly, the growth has been coming from special interest channels – especially Kids-centric channels, News and Music as table 1 shows.

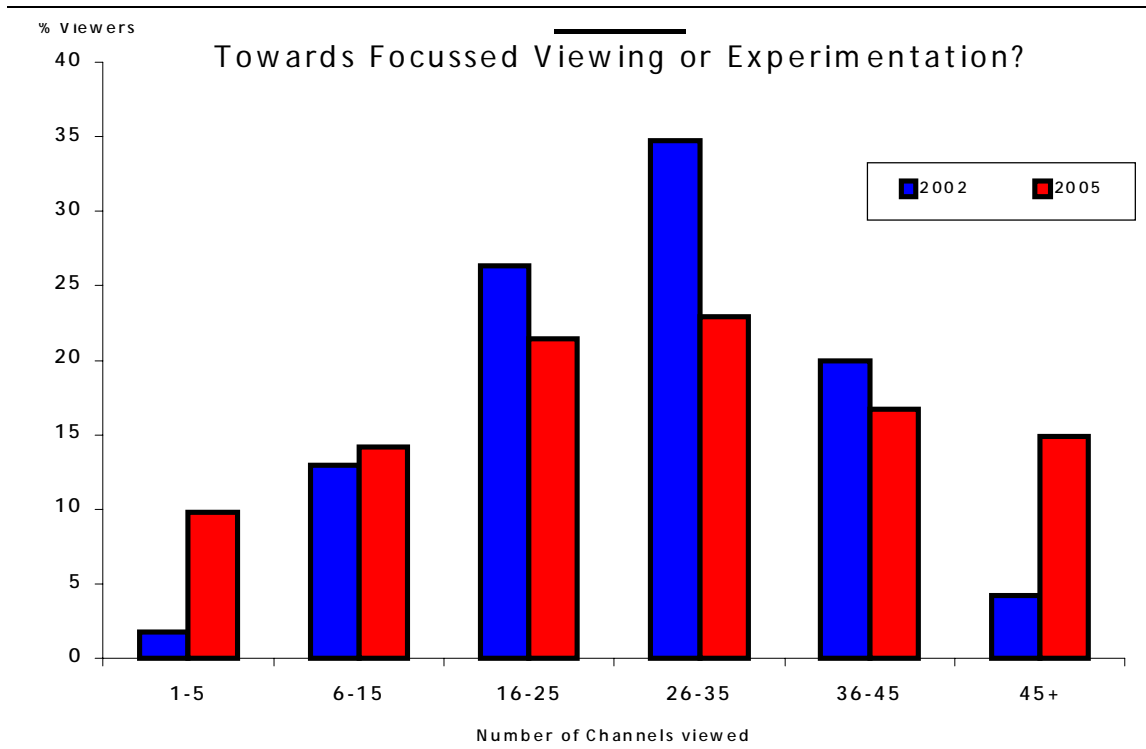
Table 1
UNPRECEDENTED GROWTH IN SPECIAL CONTENT CHANNELS

	2000	2002	YTD 2005
# Channels Reported	155	213	295
News	8	12	20
Kids	3	3	7

And a ready market exists for these channels. For one, cable subscription in India is a relatively low US\$4 a month. For this amount an Indian home can receive up to 100 channels. Moreover, a number of environmental factors have increased the challenge in dealing with fragmentation, the most important factor being the growth in the penetration of remote control. While 32% of TV sets in 2002 came with a remote control, this figure jumped to 41% in 2005. All in all, the Indian viewer has not only more choice but also a lot more power to zap away at will.

But it is not all that simple. If one compares 2002 to 2005 (based on a common sample of 128 cable and satellite homes), the graphs make for an interesting read; see figure 1.

Figure 1
TOWARDS FOCUSED VIEWING OR EXPERIMENTATION?

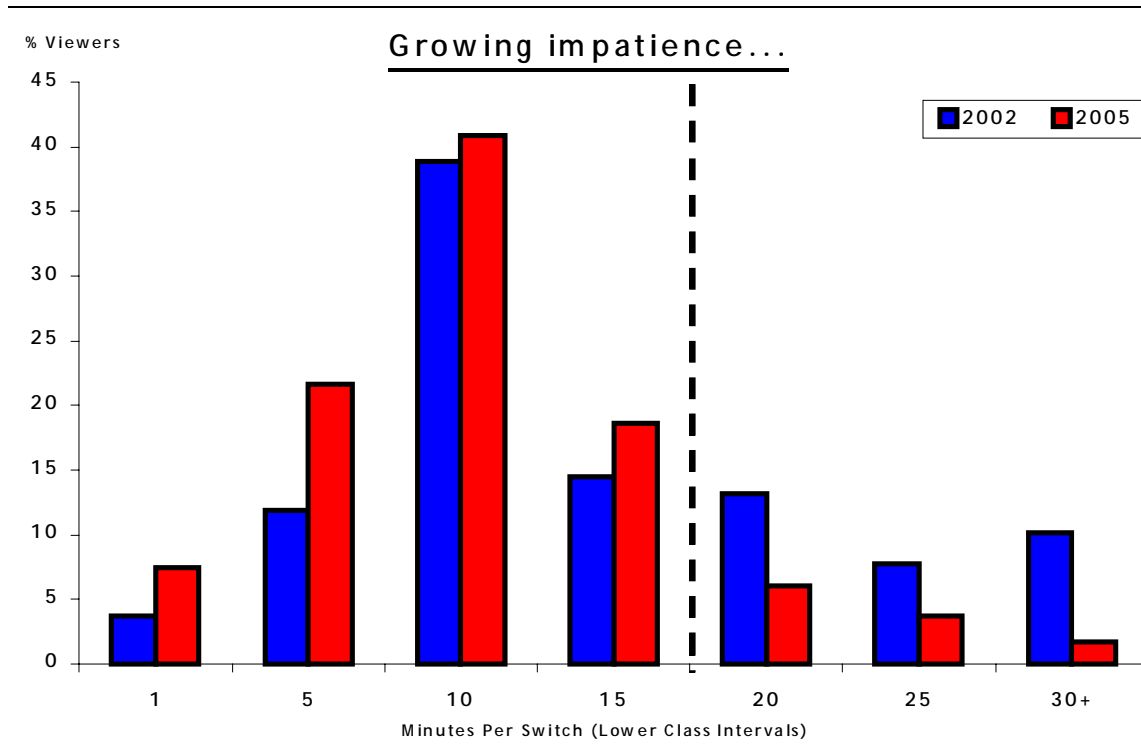


While the average number of channels viewed by a viewer was 26 in both years, there is a stark increase at the extremities of the curve in 2005 which points to two very disparate sets of individuals:

1. *The Consolidators* (channels viewed < 5): Those who have consolidated their viewing with a few set of channels now that they have the channel of their choice;
2. *The Experimenters* (channel viewed > 45): Those who have increased their surfing across channels in their unquenchable thirst for diverse content.

The data, however, do suggest that the experimenters are increasingly having their way. Figure 2 below plots minutes spent per viewing session (= channel switch), a measure of channel surfing.

Figure 2
GROWING IMPATIENCE ...



Clearly, patience is wearing thin: 30% of viewers now spend less than five minutes per channel switch. This is double the proportion in 2002. On the other extreme, just 2% of viewers on an average spend half an hour or more per viewing session, down from 10%.

It is no surprise then that the issue of fragmented audiences is the biggest problem facing Indian advertisers and broadcasters. The first step towards making the best of the situation is understanding it. Unfortunately most approaches to understanding channel surfing tend to be only number oriented and stop short of understanding the underlying motivators behind channel surfing. For instance, figure 1 shows that there are two disparate sets of audiences – the Consolidators and the Experimenters. However, the numbers stop short of telling us why these sets are emerging. What are the underlying dynamics that make a home change its habits? Why do homes surf the way they do?

A TYPICAL APPROACH

Answers to questions such as the above are typically attempted to be answered by a research user in India by commissioning two separate research studies – one a quantitative research and the other a qualitative study. On receiving the two studies, there is then an attempt at patching one onto another to ‘make sense of it all’.

NEED FOR A NEW APPROACH

While the division between quantitative and qualitative studies is well known, it comes as a surprise to many that a lot of qualitative studies conducted are actually done to supplement the TAM ratings. There is a long-felt need to look behind the TAM numbers and understand the dynamics that are behind the data. Most TAM data providers throughout the world are, of course, constrained by the fact that there are limitations on what extra data can be taken from respondents – a definite limitation is that we cannot explicitly ask an existing panel home why they watched what they did.

THE SINGLE-SOURCE APPROACH: REINCARNATING TAM PANELISTS

While this information is not readily available from existing panelists, one potentially rich source of information that has not been tapped so far is individuals who were once on the panel but have now retired from it. Most TAM panels in the world have some kind of a rotation policy, as a result of which, panelists have a certain life on the TAM panel. In the course of time, the home is retired (or drops out on its own), from which point onwards the home no longer contributes to the TAM data. TAM India follows a practice of a maximum of four years for a panel home. Throughout the time-in-panel, the home’s quality is constantly monitored and the home is dropped if not satisfactorily complying with the standards expected.

The approach used here extends the utility of the panelists beyond the time-in-panel by ‘reincarnating’ them. There is potentially a lot more data that can be yielded from these sets of homes, which to the authors’ knowledge has not been gathered before. The concept rests on the fact that the ex-panelists no longer influence the current ratings and consequently can be part of an exercise that tries to explain their viewing behavior while they were on the panel.

Mumbai, the largest TV market in India with 3.5 million TV homes was used as the market to test the concept. Cable and Satellite homes that were on the panel at some point (preferably as recent as possible) were recontacted and requested to be part of an observation study. The fact that we already have past TAM data on these homes allows us to approach the observation study with this knowledge. The observation study also involves conducting:

1. Role-playing and other response eliciting techniques (included as part of the appendix);
2. An in-depth interview.

The observations were centered on prime time, from where the bulk of viewership comes.

An important aspect of the study is the constant interlinking of qualitative and quantitative insight at every step.

FACTORS INFLUENCING SURFING – TAM DATA

Before reincarnating the ex-panelists, the first step was to understand factors influencing surfing by conducting an AID analysis. Various dimensions of surfing were taken as dependent variables, namely:

1. Average Minutes per Switch;
2. Average Minutes Per Channel Viewed;
3. Number of Channels Viewed;
4. Total number of Switching Statements.

Appendix 2 shows the top three independent variables describing each measure of surfing. Based on the results of the AID analysis, homes that fit the desired sample profile as described in appendix 3 were approached to be 'reincarnated' for the observation.

THE RESULTS

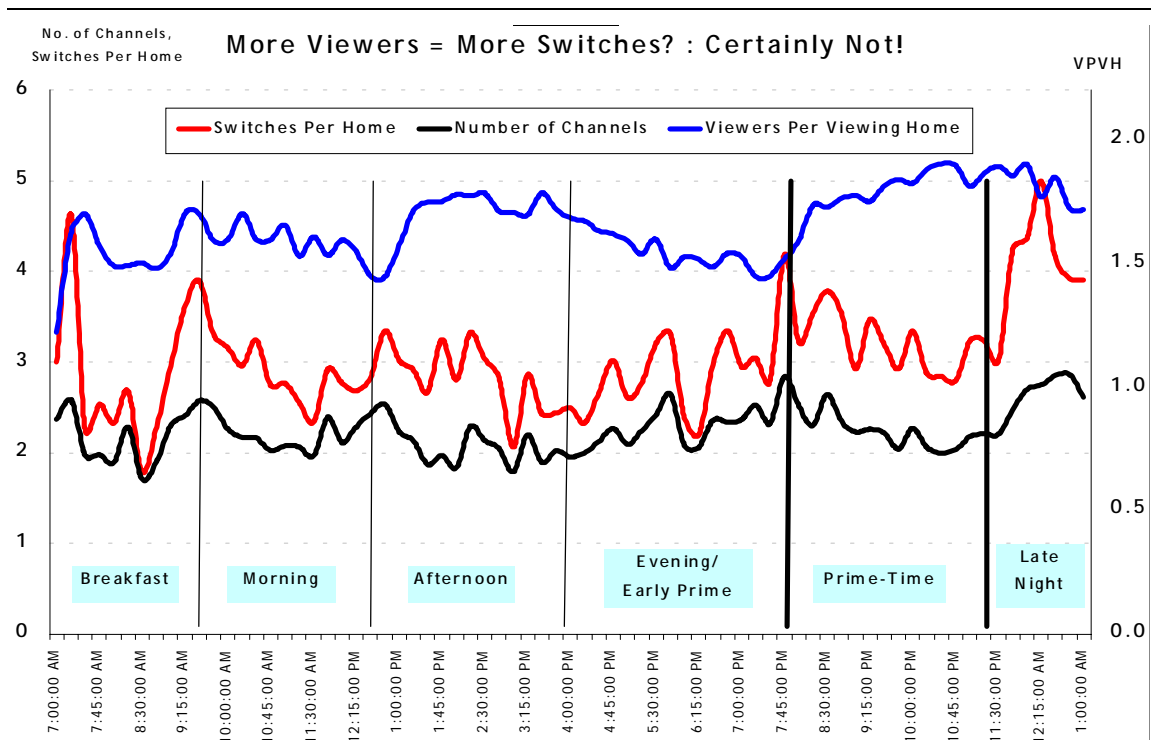
A number of hypotheses were used as starting points for the observation study, the results of which are given below:

Statement 1: Many viewers = Many switches
Reality : Many viewers = Fewer Switches!

To ascertain this, the Number of Viewers per Viewing Home (VPVH) with Switches per Viewing Home is plotted on a quarter-hour basis across an average day in the month of February 2005. Figure 3 shows Switches and

Number of channels positively correlated with each other. Curiously during prime time as the number of viewers increases, the number of switching statements decreases.

Figure 3
MORE VIEWERS = MORE SWITCHES? CERTAINLY NOT!



While the numbers can describe this relationship to this point, the observation study generates a number of causal factors, the two strongest of which are:

1. Association of certain dayparts with certain types of audiences
2. Role of each member in the family during the viewing process

The above can be represented as an activity chart of various members in an average family as seen in figure 4.

Figure 4
DAY IN THE LIFE OF A TELEVISION VIEWER

Profile	Afternoon	Evening	Prime Time	Late Night
Chief Wage Earner / Men	Away on work. <i>If return home for lunch, prefer to watch News</i>	Away on work. <i>No opportunity to watch TV</i>	Return home. <i>Possession of the Remote</i>	Time to Unwind <i>Full control on viewing. Experiment with Diverse content</i>
Housewife / Ladies	<i>Soaps, Repeats of Prime time programming</i>	Dinner preparations. If outdoors, returns back late evening. <i>Watch TV while also preparing dinner</i>	<i>Watch Soaps/Repeats intently - staves off any suggestion to surf</i>	No intent viewing - Goes with CWE's choice
Youth	School/College. <i>If at home and tries to interfere with mothers TV viewing</i>	College going children arrive. Watch mostly...sports or Music	<i>Surf in between their mothers serials during ad breaks - Battle with the father at this time</i>	<i>Watch Music, Movies for a short time with father</i>
Kids	Come home from school. <i>Share the TV with Mother</i>	At play, studies or coaching classes. <i>If watching TV, then watch kids programming</i>	<i>Surf in between during ad breaks of serials watched by mother</i>	Bed-Time
Retired members/ Grandparents	Sleep. <i>If awake, prefer to join women to watch soaps</i>	Outdoors for walk etc. <i>No opportunity to watch TV</i>	<i>Join women to watch soaps.</i>	Bed-time

For illustrative purposes let's take the case of prime time, which is when the observations took place.

The most watched programming genre during prime time is that of soaps. Most of the soaps during this time-band have been running since many years, the most successful ones for about five years. Having tracked the story line, replete with characters and plots for this amount of time, the housewives are very possessive about the programmes they watch. In fact the depth of involvement is seen in the following typifying quote by a housewife:

"I feel really bad on weekends. I really miss my serials. Other people watch movies on either TV or the CD player."

With this kind of involvement, it is not surprising that during prime time while there are a maximum number of viewers around the TV set, the housewife holds the key to viewing and does not allow much switching for fear of losing content.

In 10 of the 18 homes observed, one strategy the housewife employed was getting the kid of the household to watch the soap on a regular basis. This served to:

1. Shore up numbers on her side when there was a demand to switch to another channel;
2. A guarantee to the future when the kid grows up and would hopefully support her explicitly in her viewing.

A very interesting feature of the graph shown is that that while the difference in the switches per home between prime time and late night are stark, there is no drastic fall in the VPVH numbers which leads us to the next hypothesis.

Statement 2: Channel navigation depends on the individual Possessing the Remote.

Reality 2: Channel navigation depends on the individual Controlling Viewing.

The observations showed that physical possession of the remote is very different from having control over it to change channels.

In almost all homes, when the CWE is present, the possession of the remote is in his hands. When asked about this, the typical statement from the CWE is:

“The remote has to be in my hands – otherwise there would be chaos in the home”

or

“I decide on most important things in the home – TV viewing is no different”

The clear role that the CWE has for himself is that of a patriarch who decides what’s best for the family.

However, reality is the remote is merely a physical symbol of his patriarchal role in the family. During prime time, for instance, it is the housewife who really dictates viewing.

The difference in physical possession vs. viewing control is seen when we compare the prime time and late night dayparts (figure 3 above). In both cases, the CWE possesses the remote. However, the dayparts contrast with each other in their measures of surfing. During late night the switches per home figure really shoots up. The observations explain this by confirming that the housewife yields control of viewing to the CWE post-prime time but is very adamant about retaining control during prime time. Now, both sets of individuals have very different behavioral patterns and hence the differences in switching behavior even though the possession of the remote is in the hands of the CWE all the time.

The reason in behavioral differences can be traced to the way these groups look at television. This is best brought up through typical statements made:

Housewife:

- a) *“I really identify with the daughter-in-law shown in (serial ABC). It’s interesting to see how our lives so closely match”*
- b) *“Watching serials helps me stay in touch with the latest in clothing, jewellery, etc. It is also a good discussion point with my friends”*

Chief Wage Earner

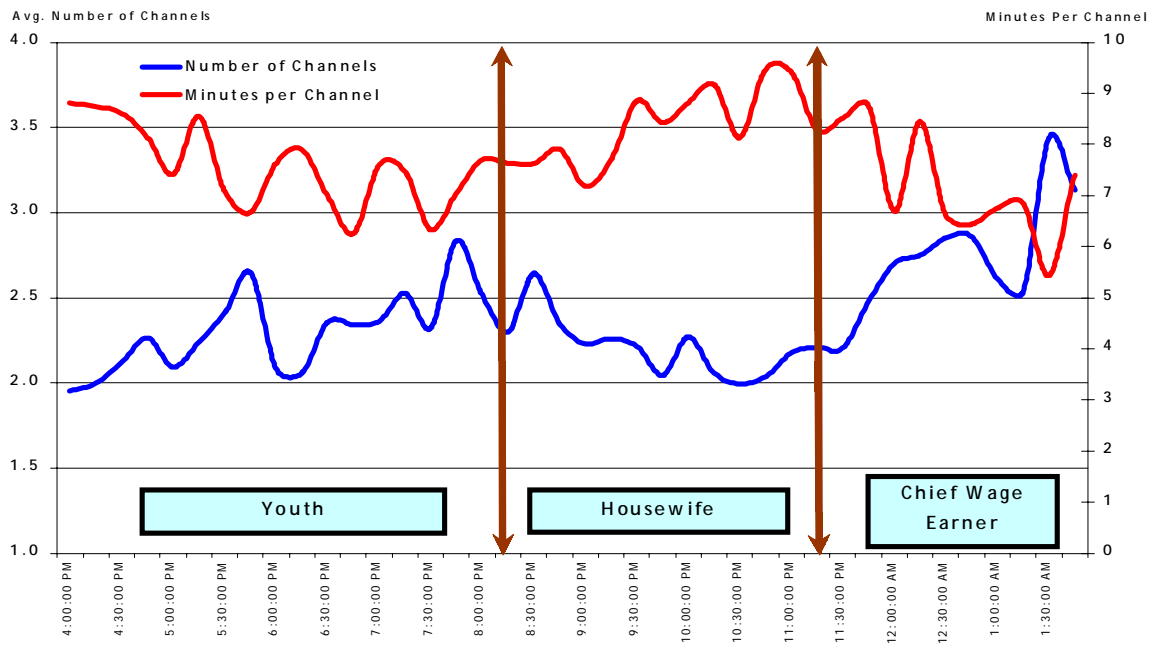
“TV for me is basically a way to unwind after a hard-day’s work. Unfortunately my wife’s serials are on when I get home so I catch up on what I need after 11:00 pm”

Youth

“I have to see TV. How else will I fit into my group?”

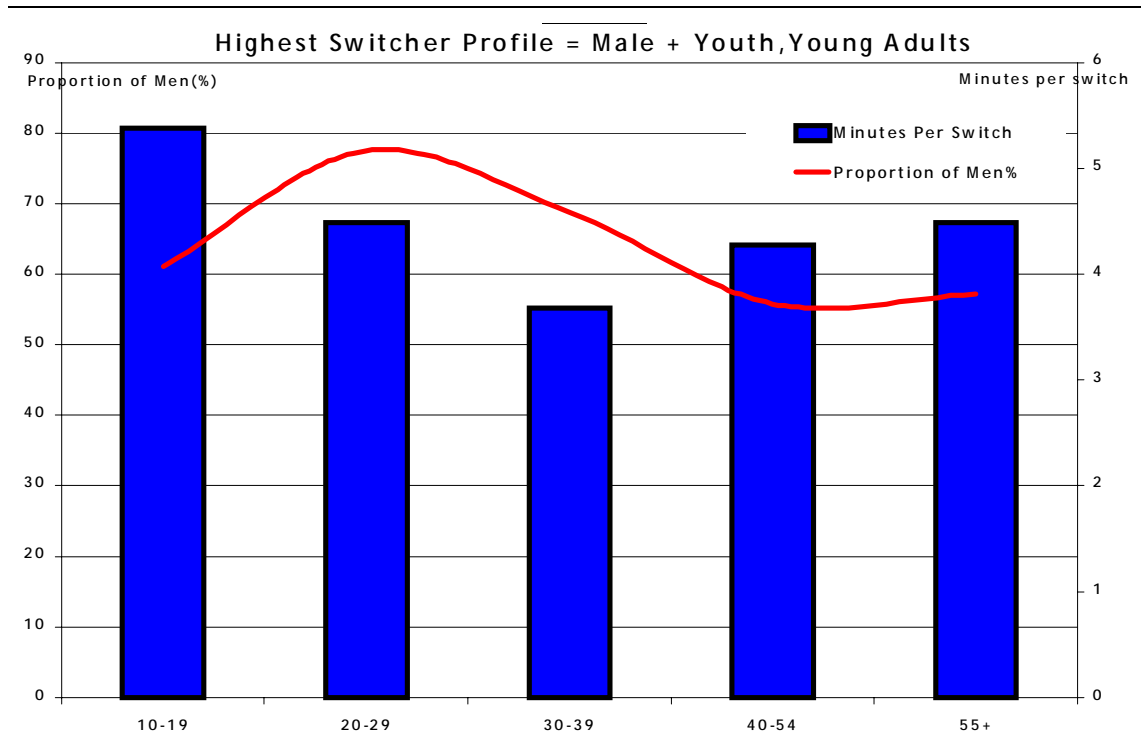
The behavioral patterns exhibited have their source in these statements. For instance, the CWE doesn’t watch TV with the seriousness of the HW. His search for ‘anything relaxing’ drives him to random surfing between channels in the hope that something turns up that will provide him the content he desires. Most surfing is between Music, Movies and News channels (so there is method in the madness!). Hence the late night phenomenon as seen in the chart below, where more channels are watched with lesser time on each channel. As a matter of fact, surfing during late night is even more than the evenings/early prime when the youth controls viewing.

Figure 5
DAYPART CHARACTERISTICS =
VIEWING CONTROLLER CHARACTERISTICS



To buttress this point, if from each home, the one individual with the maximum switching is singled out and all these individuals collectively profiled, clearly gender has a big role to play. The Male + Youth skew stems from the experimental, flirtatious nature of their viewing explained above.

Figure 6
HIGHEST SWITCHER PROFILE = MALE + YOUTH, YOUNG ADULTS



Statement 3: So, Channel Navigation is basically dependent on the 'dominant' viewer when two or more viewers are present.

Reality 3: Channel Navigation is a constant power play when two or more individuals watch. While a tacit viewing arrangement always exists in the home, the status quo is constantly threatened.

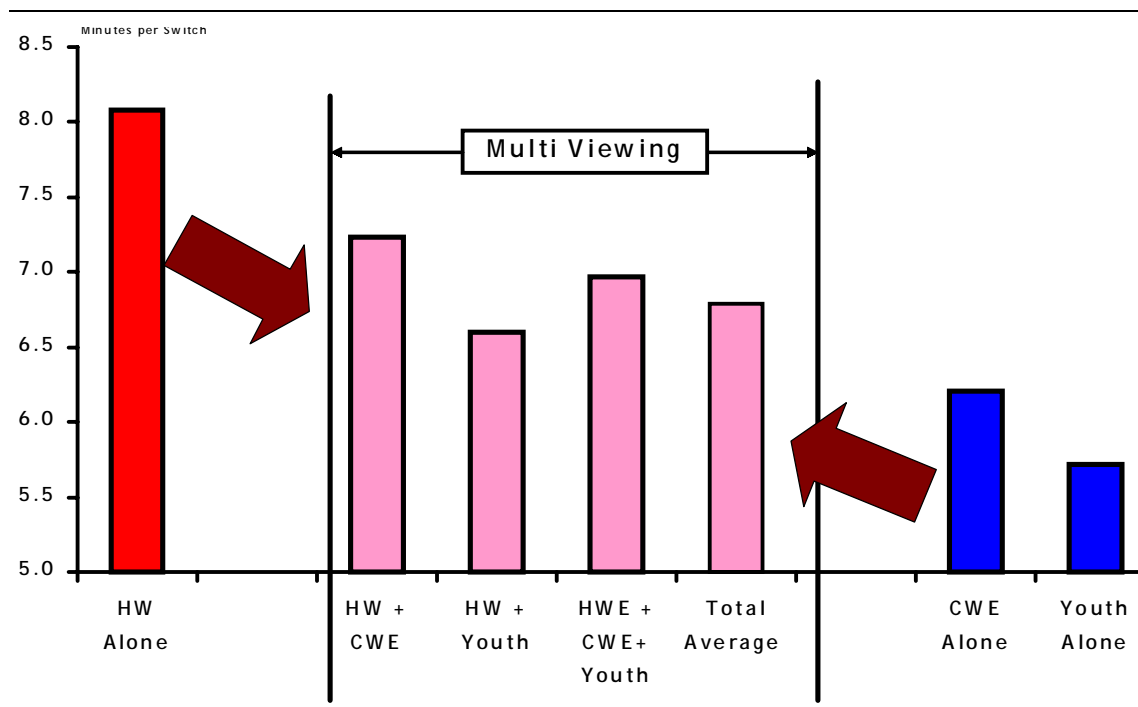
The starting point to test the above statement was an analysis on Solo-viewing vs. Multi-person viewing.

The housewife, when alone, by nature of her taking the viewing process seriously, spends about eight minutes per channel switch, in contrast to the eager-to-surf youth and men. (See figure 7.)

Now, when combinations of individuals are studied, there is a tendency for the housewife to regress to an average of about 6.5 minutes. On the other hand, the men and youth increase their stickiness to a similar number in the presence of the HW.

The chart points to a tacit viewing arrangement in the home. In fact, the unspoken arrangement has a constant undercurrent of tension or a tinge of animosity during prime time which was observed.

Figure 7
THE SWITCHING AVERAGING PROCESS



This undercurrent becomes very apparent when there is a special event being telecast which the CWE or the Youth of the home are interested in.

The tension is all the more due to individuals not understanding the others' perspective – witness a CWEs comment:

"I don't understand what those crying serials have that she's watching them. She can very well watch the repeats the next afternoon but she insists on seeing it in the night. Movies are so much more interesting."

And the HW:

"Movies will keep coming. But I can't afford a break in the storyline of my serial"

In such a scenario, ad breaks give the CWE and the youth the chance to get a glimpse of what they want. And even here there is a battle between the youth and the CWE. The first priority for the CWE is news but the youth would rather see a music video which is in keeping with line with his or her idea of TV as a means to be 'in'.

The only exception to the hold of the HW on TV is when there is a live cricket telecast, in which case the CWE and the youth join hands in vetoing the HW to give in to their demands. (This was not observed but came through during the post-observation interviews.)

Hence presence of certain family members and their attitude towards different contents play a crucial role in the *conflict-compromise-consensus* towards one another with respect to channel surfing.

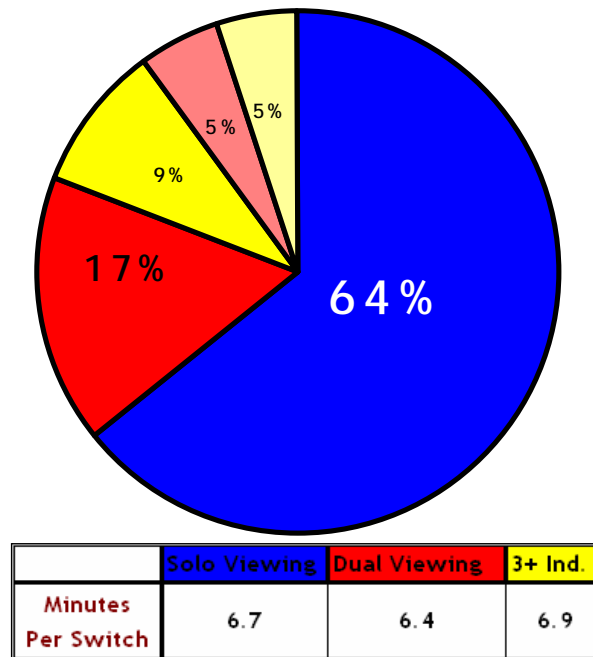
Statement 4: Therefore, surfing is all about family dynamics.

Reality 4: Surfing is inclusive of family dynamics but is mostly about individuals.

Even in urban India, 97% of TV owning households have only one TV set. Hence, the common image that pops up in a media mind in India is that of several individuals in the household huddled around a TV set, especially given the fact that about 40% of the households have a family size of five or more members.

However, the data tell us that in fact, 81% of all viewing minutes come when there is a maximum of two individuals viewing, as figure 8 shows. Moreover, the time that a home spends per channel switch does not vary much with the number of viewers coming in to the viewing session.

Figure 8
SOLO IS THE WAY



We have already seen that there is variation in surfing between a HW, CWE and a youth. The observations also yielded data that suggested that in every home there appears to be a compulsive surfer. To check this, variations in Switches per Hour at both the individual and home level were conducted.

Remarkably, 85% of homes had individuals with more than one and a half times the home channel switching average. The game plays and interviews revealed that most viewers wanted the remote in their hands to maximize their investment in viewing. To this end, each member in the household staked a claim to a certain daypart. For instance, as seen earlier, the CWE is almost certainly late night. The end result of all this is the advent of the solo viewer age. As the trend in homes having multiple TV sets increases, this skew towards solo viewing will become exacerbated.

Statement 5: Surfing is largely a break phenomenon.

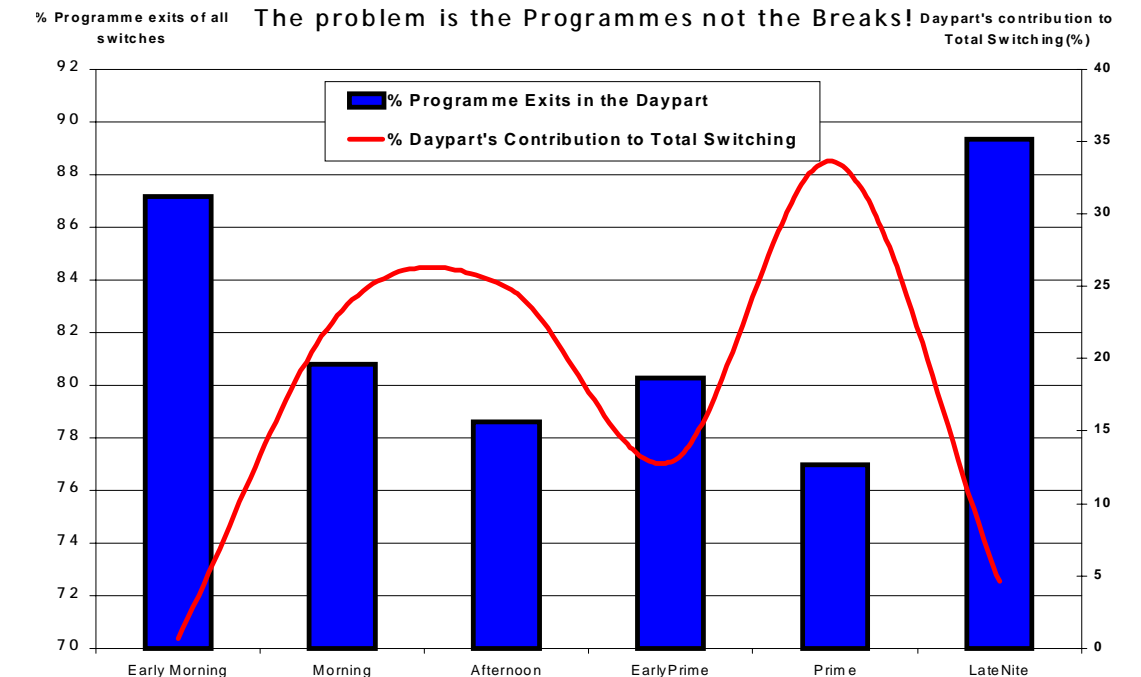
Reality 5: The problem is the programmes not the breaks.

When channel switching is categorized into switching that occurs during a programme or a break, the result is a very large 80% of all channel switching getting categorized as programming switching. While this is, in part, due to the sheer ratio of number of programme minutes to break minutes in favour of the former, nonetheless it does serve to break a mindset that breaks are the major reason for channel switching.

Interestingly, as seen in figure 9:

- a) Programme exits are least in proportion during prime time and afternoon as compared to all other dayparts – though still a sizeable 80%.
- b) However the total number of switches is greatest during these dayparts
- c) Programme switches are most common during early morning and late night dayparts, where about 90% of all switching takes place during programmes.

Figure 9
THE PROBLEM IS THE PROGRAMMES, NOT THE BREAKS!



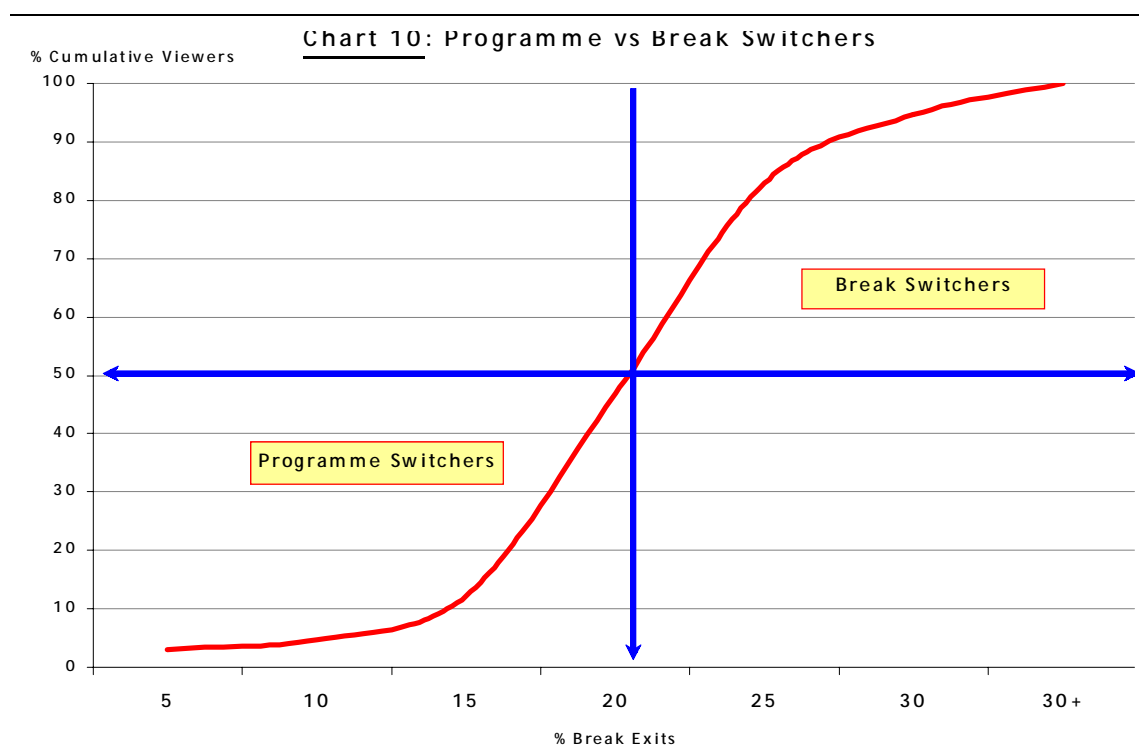
Clues to the causal factors behind this behavior are gained from the insights gained from the observation studies.

High involvement levels of the housewife with the soaps that play in this daypart explain the least percentage of programme exits during prime time. Also, her control over viewing in this daypart also means that she does not allow anyone else to change channels at this time. The time she herself initiates/allows channel changing is:

1. When she 'guesses' the next element in the current programme and moves into a soap on another channel to sample that programme. When asked about this behavior the typical statement was:
"After so many years of viewing the serial we sometimes know what's going to come next. At these times, when we move into another programme we are fairly sure we won't miss out on the current storyline."
2. During Breaks. Here her role in the channel changing process is lesser as compared to the Males and Youth, for whom this is only time to sample/watch programmes of their choice. As the break comes to an end, the housewife steps in and checks if the serial has restarted. If not, she uses the opportunity to sample other serials.

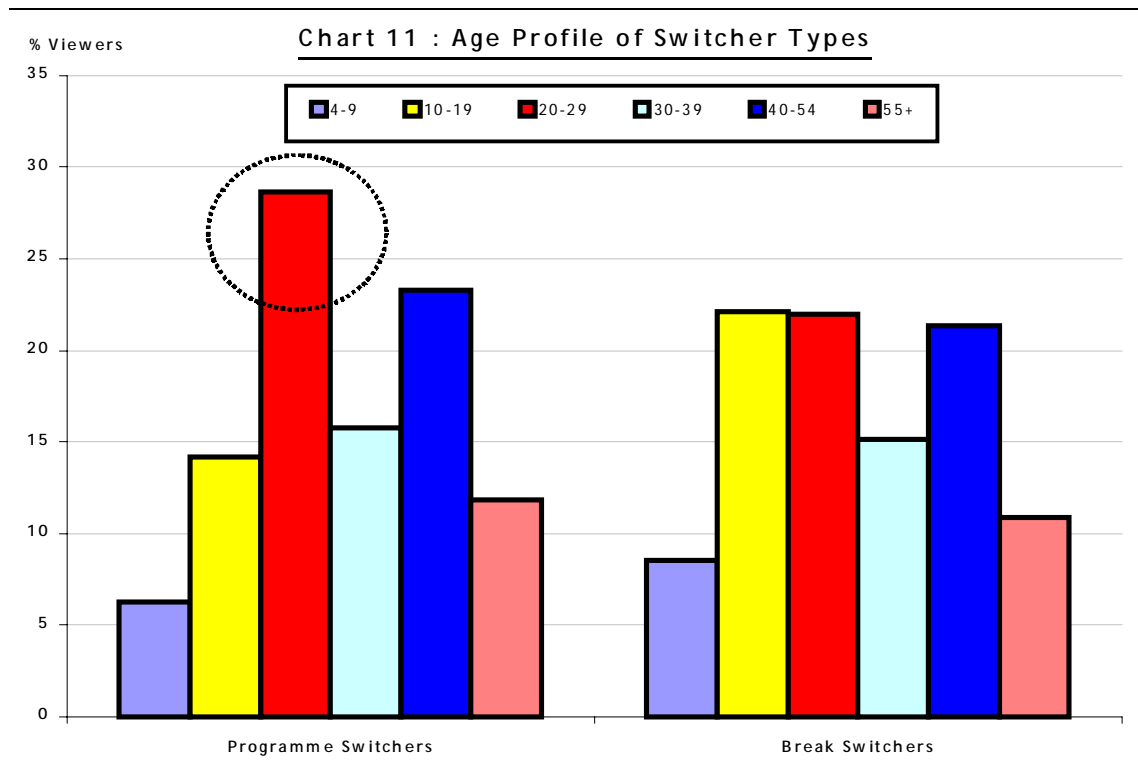
To synchronise the findings with the TAM data, all viewers who had an 80% or more component of switching from programmes were classified as Programme switchers and the rest were classified as break switchers. This cut-off was arrived at by observing the frequency distribution of viewers by break-exits, as shown below.

Figure 10
PROGRAMME VS. BREAK SWITCHERS



The programme switchers did not exhibit any differing household characteristics when compared to their break switching counterparts. So individual variables were taken and it was no surprise that 'Age' came out as one of the strongest discriminators between programme vs break switching, as shown in figure 11.

Figure 11
AGE PROFILE OF SWITCHER TYPES



There is also gender skew (not shown in the above chart) in that 65% of the programme switchers in the 20-29 age group are Males, a phenomenon explained earlier.

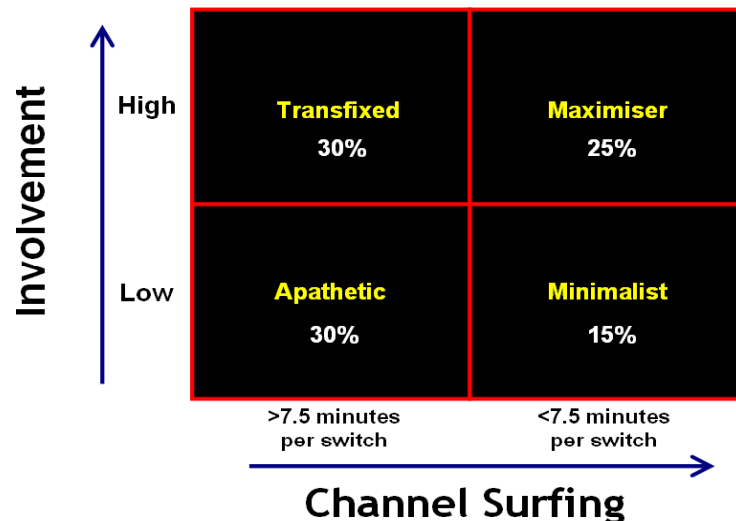
Statement 6: Surfing is random.

Reality 6: There is order in chaos.

A third of the homes visited had grouped channels in their TV set in a particular order. Thus when there was a need to surf to a particular channel, the preferred channels were all 'close by' (as a respondent put it) and there was no need to memorise the station number of the preferred channel. Irrespective, surfing tended to be within a genre of channels, say, music or movies, in line with the individuals' content expectation.

There was also a clear behavioral pattern of switching that emerged depending on how individuals in a home surfed. The observed behavior was checked with the TAM data (at an average all-day level) to arrive at the threshold definitions of channel surfing - 7.5 minutes per channel switch. This is captured in figure 12. The figures in the quadrants reflect the proportions of respondents observed.

Figure 12
BEHAVIOURAL SEGMENTS



It should be noted that the above segments are products of prime-Time observations. As seen earlier, factors such as control over remote vary during the day and the above segments would consequently change by daypart and content tuned to on the TV set.

1. Maximiser

- High involvement, High surfing
- A need to maximize the 'Return on television viewing time'
- Looks for complete control over remote
- Advertising breaks looked upon as an opportunity to surf to other channels to maximize viewing time return. If control of remote not available (as in the case of Males/Youth during prime time) then ad. Breaks are the perfect opportunity to sample other programmes
- Respondents in this quadrant flaunted their ability to state the exact position of channels on the TV set

2. Minimalist

- Low Involvement, High surfing
- Surfing done to fill in time available at home – to reduce boredom
- Is satisfied only with only basic storyline – just wants a feel of different programmes
- Maximum propensity to surf during programmes
- Is satisfied with marginal control over the remote

3. Apathetics

- Low Involvement, High Surfing.
- This quadrant is mostly men who linger in the room where the housewife is watching her serials
- The apathetic does not have any opinions on what to watch and is a passive viewer. This follows from the tacit viewing arrangement explained earlier where the men accept (though reluctantly) that prime time belongs to the woman.
- Remote holds little value.
- An important difference between this group and the maximiser is the apathy that this group exhibits during even during ad breaks. While during prime time males in either group do not have control over the remote, the Maximiser looks at advertising breaks as a great opportunity to sample programmes as opposed to the Apathetic.

4. Transfixed

- High Involvement, Low surfing
- Almost completely made up of women
- Absolute control over the remote except during the advertising breaks when she allows for limited surfing by other members
- Follow a fixed viewing timetable
- Most influenced by habit, in-programme promotions and word-of-mouth from similarly involved groups.
- Programme champions in the home.

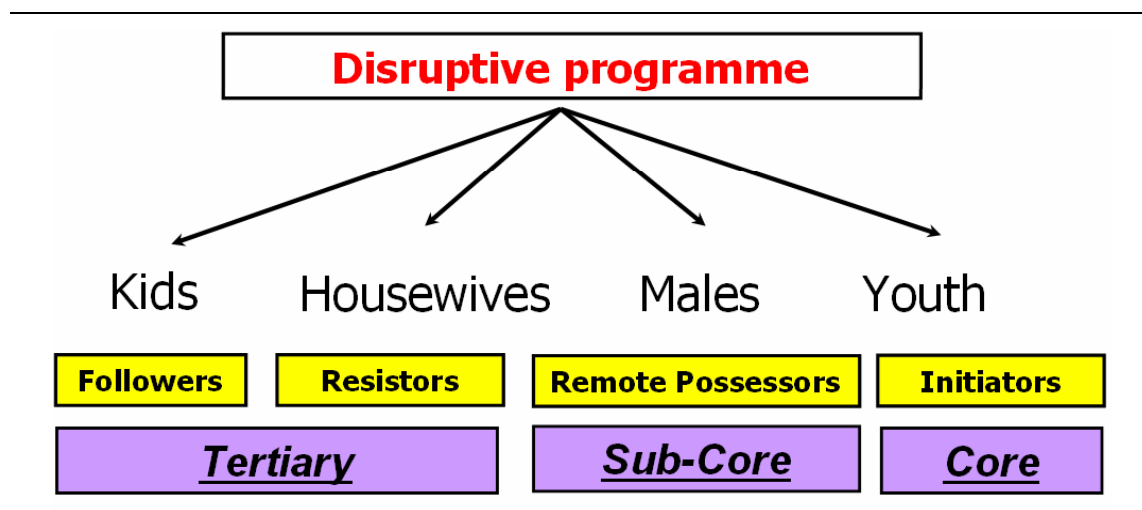
APPLICATIONS OF THE STUDY

Knowledge accruing from the observations and data have a wide variety of application areas. Some of these have already started yielding results when used on actual broadcast or media planning in India. Others are concepts which are still being tested. As an example two applications are listed below:

1. Promotions

Presence of youth plays a pivotal role in the success of Disruptive Programming. By Disruptive Programming is meant programming which is broadcast at a time that is traditionally not meant for such genres. The case studied was that of *'Indian Idol'* – the Indian version of *American Idol*. *Indian Idol* was telecast at prime time usually reserved for soaps and serials and not Talent Search/Music programmes, the genre of *Indian Idol*. The targeting hierarchy for a potential disruptive programme is reproduced below:

Figure 13
TARGETING HIERARCHY FOR PROGRAMME PROMOTIONS



Due to the fact that the Housewife controls the remote during prime time, she is very resistant to programmes that do not fit into her idea of what TV is. Her loyalty towards the existing soaps also does not allow her to allow any other programming format from being viewed. In the case of *Indian Idol*, both men and youth connected to the programming. So what initially started as sampling during the breaks by the youth soon turned into a move by the men and youth to wrest control of the remote away from the housewife. The youth here were the programme initiators with the men providing support. Figure 13 was the result of an observation study among ex-panelists combined with analysis from TAM data.

2. Targeting - Plan Stability

This has two aspects:

○ *Plan for non-Plan TGs!*

While traditionally, attention during the media planning process is concentrated on the Core TG, the study has shown how non-core TG individuals are important in the channel surfing process. For instance, as seen in figure 7, the very fact that a youth is present in the room decreases the stickiness of the housewife to a channel by 19%. Thus all other factors being equal, programmes which tend to have lesser youth presence tend to be more stable. Thus, to achieve greater stability in media plans (Plan vs. Actual GRPs), 'Presence of youth' turns out to be an important parameter. Moreover, the fact that control of remote/viewing varies by daypart can be used by a media planner to effectively juggle between airing spots on an original episode at Prime-Time (with greater instability) to airing them in the afternoon (with more stability).

- *Collaborative Filtering*

Since there is an inherent reasoning by an individual (even though sub-conscious) to surfing, work is in progress by TAM India to devise a targeting process based on the concept of Collaborative Filtering which tries to predict what an individual watching a particular channel at a particular time with a certain profile will surf to. Results of this study can be used to make plans more robust by following the viewer as she/he surfs.

3. Programme Concept testing

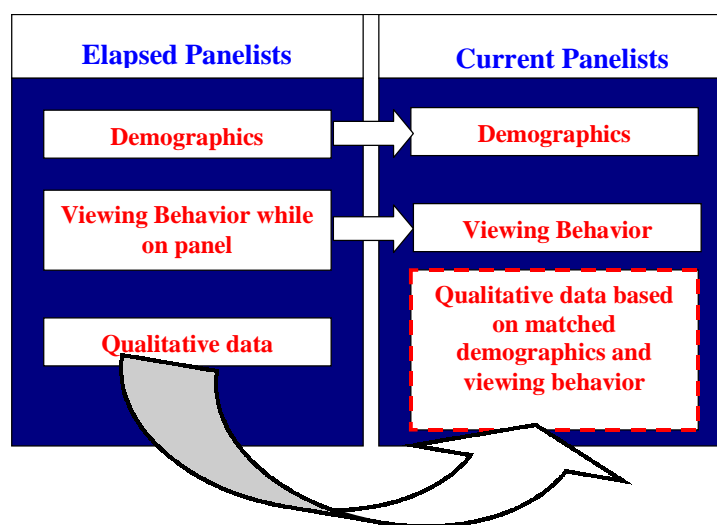
This is an exciting area of study especially given that we already have detailed data on the respondents and thus brings in greater surety in the final result.

CONCLUSION

The process of using ex-panelists to try and understand channel surfing yields rich insights. While in this case, Channel Surfing was used as an illustration, the concept and process can be used to study a variety of viewing phenomena.

On a more long-term basis, it is the authors' intention to implement a programme to conduct the observation studies among as many exiting panelists as possible. Over time, there will be enough observations to conduct an exercise to fuse qualitative information into the existing TAM data, depicted in figure 14.

Figure 14
FUSING QUALITATIVE INFORMATION INTO TAM



This implies a change in targeting TGs from Demographics to what the media industry always wanted – a data source that allows for planning on both quantitative and qualitative measures.

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APPENDIX 1

QUALITATIVE TECHNIQUES USED IN THE PROCESS

The observations were conducted across two weekdays and Sunday. The observation time was chosen to be from 08:00 pm to 10:00 pm on all days. The observer recedes into the background at the same time making meticulous notes on all the dynamics surrounding viewing behavior in the home. After the observation, the elements observed during the viewing process are used as probes to reconstruct the behavior pattern which enacted in the form of games/role-plays.

Given that TV viewing behavior involves a lot of sub-conscious elements, rather than direct questions, engaging game/role-plays were used. The advantage of this approach is that:

1. It makes it easy for respondents to find an outlet for expression of their behavior without getting them into a purely cognitive mode.
2. Minimises recollection effort.

Four specific game/role-plays undertaken were:

1. *Battlefront*: The respondents were told that their house was a battlefield and the prize was the remote / control over the television. They were asked to make teams within their family – people who want the same end on one side vs. the other people in the family. The respondents were asked to talk about the leader of the teams / their missions / and their game plan to get their own way – weapons used, etc.
2. *Remote deprivation/Remote obituary*: The remote is asked to be imagined as a person who has now passed away. The individual is asked to picture what she/he would feel like. How would it change the dynamics in the family?
3. *Human Remote*: The respondent is asked to imagine that the interviewer is a human remote. What are the instructions that the respondent would give the remote? What are the channels that the remote is asked to switch to? The respondent is also probed on the reasons for the specific directions.
4. *Family 'Panchayat'* – Panchayat is an Indian word signifying a village committee. The Panchayat is regarded as the supreme dispute settling mechanism in the village. In this case, the respondents are asked to speak about another members' surfing behavior. For instance the wife is asked on the husband's surfing habits eg. Remote Possession, Rapid surfing etc. based on the wife's responses the husband is turned to and asked whether he agrees with his wife and so on.

Apart from all this the member most frequently at home was asked to draw out the typical activity spacing of the family members.

APPENDIX 2**RESULTS OF THE AID ANALYSIS WITH VARIOUS MEASURES OF SURFING**

No	Dependent Variable Independent Variable	Average Minutes per Switch	Average Minutes Per Channel Viewed	Number of Channels Viewed	Total number of Switching Statements
1	# Channels Viewed	Y	Y		Y
2	SEC	Y			Y
3	HH Size		Y		Y
4	Preferred Viewing Language			Y	Y
5	Education of CWE	Y			
6	Channels available		Y	Y	
7	TV Type			Y	

APPENDIX 3**SAMPLE DESIGN FOR THE OBSERVATION STUDY
(FIGURES IN HOMES)**

#Channels Viewed	SEC AB		SEC CDE	
	1-4	5+	1-4	5+
1-27	2	3	2	2
28+	2	3	2	2
Total 18 Homes, 76 individuals				