SINGLE SOURCE – INVESTIGATING CATEGORY BEHAVIOR VIA MEDIA MIX DRIVEN PROCESSES

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1.0   Background

In a continuing effort to enhance the value of information, via integrating multiple sources together, ACNielsen has begun to examine ways in which it can implement this in Hong Kong to aid in the area of media planning. ACNielsen conducts multiple research to aid in media planning, including Media Index for print measurement, Television Audience Measurement, Consumer Panels, Retail Measurement and customized research.

The Media Index provides a one-time static category behavior descriptors along with broad usage patterns for major mass media, in addition to print behavior variables. However, it is not designed to capture the dynamic changes in brand/category usage, which is the domain of Consumer panels. Even though ACNielsen conducts both these types of research, individually they are unable to relate media behavior to changes in category behavior. For example, if we wish to target media specifically to early users of a recently launched brand, or, if we wanted to arrest the decline of a brand by addressing those who may have moved away from the brand in last two-three months, this is currently not possible through the existing approach.

As a result, ACNielsen has administered a once a year self-completed media habits questionnaire, on all it panelists on the consumer panel in Hong Kong in July 2003. The results of the first-wave data have been used to demonstrate how media mix can be more sharply focused on consumers exhibiting a specific category behavior – be it brand switching behavior, intensity of consumption or response levels to a specific brand initiative (e.g. a promotion/contest).

These results would demonstrate the value of 'single source' data for media planning, and would pave the way for similar developments for other markets in the region.

1.1 ACNielsen Homescan - Hong Kong

ACNielsen Homescan captures actual consumer purchase information via a permanent, syndicated and representative sample of a studied universe. Demographically representative households are selected to reflect the total population. Each household is equipped with a hand held barcode scanner to allow panelists to record purchases, either from pack barcodes or alternatively from an ACNielsen code book, after each shopping trip.

In Hong Kong, ACNielsen Homescan was launched in October 2000 with a sample of 1,200 households to represent the Hong Kong population. Households record their purchases for over 200 product categories after each shopping trip. Homescan's continuous tracking of consumers and their purchasing habits, provides rich information on trends and the changing dynamics of who's buying what, when and where.

1.2 Media Index

ACNielsen Media Index was launched in Hong Kong in 1969. It is a multi-media survey providing a comprehensive picture of the media consumption of the Hong Kong population. The survey results provide vital insights to media owners in marketing their advertising space and for management decision-making for their publications as well as to advertising agencies and advertisers in their media planning. The information covered includes media consumption habits such as:
- Newspaper/ magazine reading habits,
- Viewing habits of terrestrial, cable and satellite TV channels,
- Listenership of radio stations,
- Usage of cinema and the Internet,
- Usage of public transports and the opportunity to see other outdoor media.

The Hong Kong Media Index also provides a useful platform for assessing the consumer's shopping habits, including shopping centres, supermarkets, department stores, chain stores, daily stops, convenience stores and wet markets. Moreover, in order to enable media-owners and media planners to target specific advertisers, the study asks about the usage of products and services as well. In total more than 50 product categories and 500 brands are covered. All the above information can be cross analyzed by the consumer's demographic and socio-economic information, as well as their life-styles. In addition a segmentation analysis has been added onto the Hong Kong Media Index from mid 2002 onwards. This segmentation analysis will help better understand the consumers' mindsets as well as their attitudes.

1.3 Single Source Data - A better way for making media decisions

Collecting the media habits information from the same set of households who provide their purchasing information, allows us to understand media habits of households exhibiting different category or even cross-category behavior. This data allows us to study:
a) Media behavior of shampoo buyers who have responded to promotions versus that of those who did not do so
b) Media behavior of brand loyalists in a category versus that of brand flirters
c) Demographic and media behavior differences between early triers of new brands and non-triers across a basket of product categories
d) Media behavior differences between heavy and light users of a product category
e) In face of a launch of a new brand from a competitor, media behavior of those who continue to buy a specific brand over successive purchase occasions versus that of those who bought that specific brand on their purchase occasion just prior to the launch of the new brand but chose to try the new brand during the subsequent purchase occasion

In short, the rich category behavior patterns unearthed by a household purchasing panel can be superimposed on media behavior information to obtain direct linkage of category behavior with media behavior. Thus, the single source data allows us to understand the media behavior of those exhibiting a very specific category behavior over a specific time period. As a result, for media planners, it allows greater accuracy in targeting media exposure. Given the dynamic nature of many FMCG categories, and the frequency of data collection of Homescan, the agility of response offered by this single source data is also very valuable.

1.4 Media Measures on Homescan Panel and comparison of measurements with those on Media Index

The Homescan media questionnaire focuses on media habits, rather than vehicle specific measurements. This has been done for two reasons. Firstly, media habits as opposed to vehicle audiences are likely to change less frequently in a market like Hong Kong, and, therefore, can be assumed to be fairly stable between two successive annual administrations of the media questionnaire to Homescan panelists. Secondly, a longer questionnaire, which is necessary for vehicle level audience measurement, would not be acceptable to panelists.

The specific measures included in the Homescan media questionnaire are:

TV
- Channels viewed in past 7 days
- Frequency of watching different day parts over Weekdays/Sat/Sun
- Frequency of watching different types of programmes (Serials/Drama vs Movies)

Print
- Frequency of reading 16 key newspapers
- Sections of newspapers read
- Frequency of reading 21 key magazines

Radio
- Weekly frequency of listening to Radio
- Minutes of Radio listened in a day
- Type of programme listened to on Radio
- Weekly frequency of listening to different stations

Out of Home
- Whether ads seen on different OOH media
- Forms of transportation used and hours of usage in a week

It is important to compare and validate the results obtained from the Homescan media questionnaire with those obtained from Media Index, the database used by media planners. Below are a set of tables comparing both sets of data in the area of Television, Radio and Out of Home.

Table I, compares the findings from the two studies for channels viewed in the past week. The figures for the top two channels are fairly comparable. However, for the next two channels – TVB Pearl and ATV World the Homescan Media questionnaire figures are higher than those reported in Media Index.

Table I - Homescan Media Questionnaire vs Media Index - Channel viewed in past 7 days		
	% Viewership (viewed in Past 7 days)	
Channels	Homescan Media Questionnaire	Media Index
TVB Jade	98	94
ATV Home	81	80
TVB Pearl	66	45
ATV World	39	27

Base: Homescan Media Questionnaire - all grocery decision makers; Media Index - all respondents

Table II compares average hours of Radio listened per day for the two studies. As we can see, the two studies report very similar intensity of Radio listening 1.7 – 1.8 hours of Radio listening per day.

Table II - Homescan Media Questionnaire vs Media Index - Radio listening per day		
	Homescan Media Questionnaire	Media Index
Average hours listening to the radio per day	1.7	1.8

Base: Homescan Media Questionnaire - all grocery decision makers; Media Index - all respondents

Table III compares past seven days listenership for individual radio stations between the two databases. Since Homescan Media Questionnaire has only collected the frequency of listening to individual stations and Media Index reports stationed listened to over the past seven days, we have used the frequency of listening as probability of listening to a station in a week and then calculated the expected number listening to a station in an average week. This has then been compared with % listening to each station over past 7 days as reported in Media Index.

Of the five major stations, Commercial Radio 1 and Radio Television HK 2, highlights two different sets of figures. For the other three stations – Commercial Radio 2, Radio Television HK1 and Metro showbiz, the figures are very comparable.

Table III - Homescan Media Questionnaire vs Media Index - Magazine read		
	% Listening to a station over past 7 days	
Stations	Homescan Media Questionnaire	Media Index
Commercial Radio 1	27	17
Commercial Radio 2	15	12
RTHK 1	15	10
RTHK 2	22	10
Metro ShowBiz	10	7

* Homescan media questionnaire has only collected the frequency of listening while Media Index reports stations listened to past week. As a result, Homescan media questionnaire frequency data has been used to arrive at estimated number of listeners over a week.
Base: Homescan Media Questionnaire - all grocery decision makers; Media Index - all respondents

Table IV gives the comparison between the two studies on Out of Home advertising seen in the past one month. While figures for Bus and MTR are fairly comparable across the two studies, Homescan Media Questionnaire reports significantly higher figures for Mini-bus and Taxi.

Table IV - Homescan Media Questionnaire vs Media Index - Out of Home viewing		
	% Having seen Ads on the OOH Medium (in past month)	
Out of Home medium	Homescan Media Questionnaire	Media Index
Bus	90	87
Mini -Bus	50	31
MTR	67	61
Taxi	38	17

Base: Homescan Media Questionnaire - all grocery decision makers; Media Index - all respondents

After reviewing the comparisons, it is obvious that the absolute measurements are not always the same across the two type of research. It also must be noted that the Homescan Media questionnaire is not designed to be used for reporting reach and frequency for media plans given the methodology and the sample size, this is the function of the Media Index. However, the

information can be used to identify the differences in media behavior of two groups exhibiting different category purchasing behavior. Even if the Homescan media questionnaire findings, in absolute terms may not be measuring what Media Index is measuring, measurements for both the groups exhibiting different category behavior will be skewed in the same direction, and, therefore, the differences between the two groups should still be applicable. These can then give us useful directions for media that can be used to reach out to one group more than the other group.

2.0   Case Study: The launch of Lux Super Rich

Lux Super Rich is a shampoo brand that was launched in Hong Kong in April 2003. Given that the media habits questionnaire was administered in quarter 2 of 2003, we felt that the timing was very opportune to study the impact of the Lux launch on the other brands in the category. This case study has been built on the bases of how one of the existing brands, such as Pantene can use this data to make best media choices to target Lux triers.

Since the launch of Lux Super Rich in Hong Kong, we have seen a strong growth month on month of triers of the brand. By the end of June 2003 (3 months after launch) the brand achieved a remarkable 10% trial rate (i.e. 10% of the Hong Kong household population bought the product at least once). The launch of Lux Super Rich was heavily supported by media advertising, to the extent that over the last three months, the advertising spend on Lux resulted in a 12% Share of Voice. This aided in driving brand awareness and brand equity but also highlights the success of converting media exposures to purchases.   This is highlight by Chart I.

Chart I - The build up of Lux Triers since Launch

The build of Lux Triers since Launch
Cumulative Penetration – April to June 2003

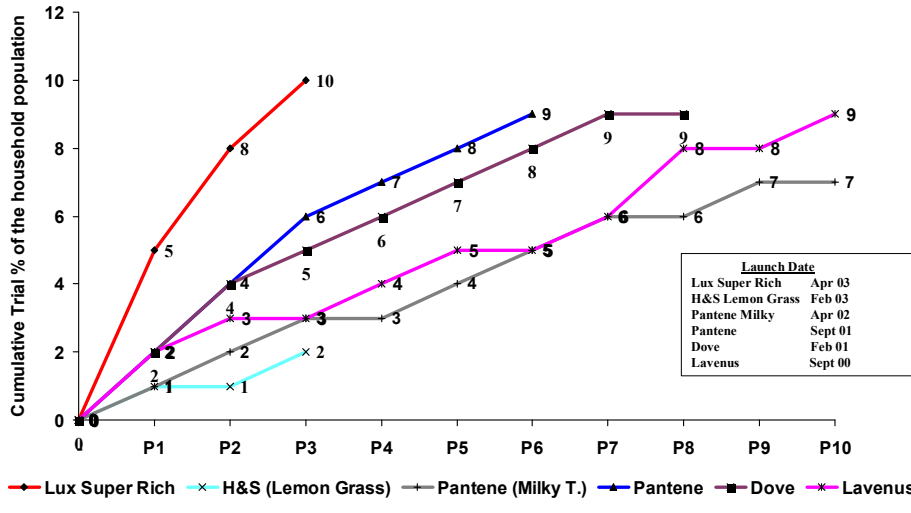|	Mar-03	Apr-03	May-03	Jun-03
Media Spend 000$	176	14,104	11,951	5,842
Share of Voice	0.3%	16%	13%	7%
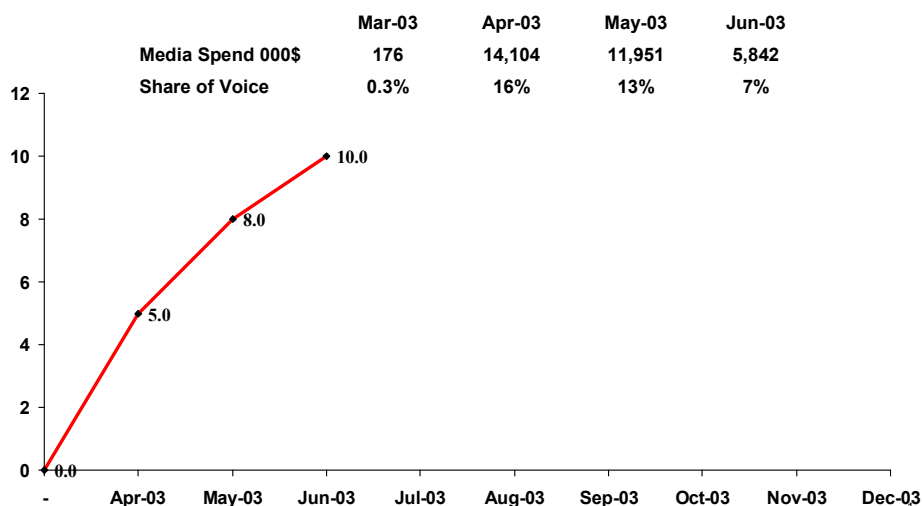
Base: Homescan Total Shampoo, Total Outlets
Trial of Lux Super Rich

From the chart above you are able to see a positive launch for Lux, but how successful has the launch been? This is highlighted below in Chart II where the build of trial of Lux is compared to that of other brands / variants in the shampoo category. It is clearly evident that after 3 months Lux has built up the highest trial rate of 10% with Pantene achieving the closest trial rate at 6%. What is even more impressive is that what Lux has achieved after three months (10% trial rate), no other shampoo brand has been able to achieve even after 7 to 10 months.

Chart II - Trial Rate of Lux Super Rich vs Past Shampoo Launches

Trial Rate of Lux vs. Past Shampoo Launches
Cumulative Penetration – 2003

Launch Date	
Lux Super Rich	Apr 03
H&S Lemon Grass	Feb 03
Pantene Milky	Apr 02
Pantene	Sept 01
Dove	Feb 01
Lavenus	Sept 00

Legend: ◆ Lux Super Rich ✕ H&S (Lemon Grass) + Pantene (Milky T.) ▲ Pantene ■ Dove ✳ Lavenus
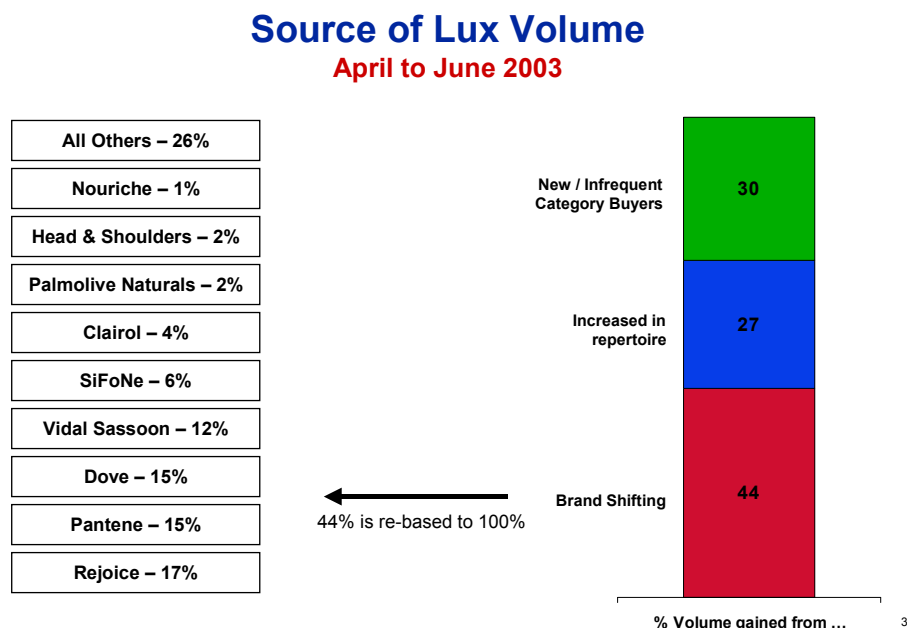
Base: Homescan Total Shampoo, Total Outlets
Trial of Lux Super Rich vs Other Brands

In another key factor in understanding the success of the brand launch is to understand where the growth has come from. Tracing the sources of volumes of Lux, you can see below in Chart III that Lux has gained its volume from infrequent category buyers 30%, increases in consumers purchase on the category (i.e. buying on top of their existing purchases) 27% and 44% volume gained from consumer switching their choice of brands from a competitive brand into Lux Super Rich.

Within the brand shifting it is evident that Lux has predominately gained from Rejoice, Pantene and Dove. Although there seems to be significant cannibalization with Dove (another Unilever brand) it has overall grown the share of Unilever in the market place. At the same time it has made significant gains from brands such as Rejoice, Pantene and Vidal Sassoon, which are all Procter & Gamble brands.

Finally, it is also important to note that the highest level of interaction between brands exists between Lux Super Rich and Pantene. Thus, of all Procter & Gamble brands, Pantene is the one that has been affected most by Lux.

Chart III - Source of volume gain of Lux

Source of Lux Volume
April to June 2003

| All Others – 26% |
| Nouriche – 1% |
| Head & Shoulders – 2% |
| Palmolive Naturals – 2% |
| Clairol – 4% |
| SiFoNe – 6% |
| Vidal Sassoon – 12% |
| Dove – 15% |
| Pantene – 15% |
| Rejoice – 17% |

New / Infrequent Category Buyers — **30**

Increased in repertoire — **27**

Brand Shifting — **44**

← 44% is re-based to 100%

% Volume gained from …   3

Base: Homescan Total Shampoo, Total Hong Kong
Source of Lux Super Rich volume gain

Overall it is clear that the launch of Lux was an impressive launch in terms of gaining trial to the brand as well as gaining volumes from a set of similar positioned brands. Given the successful launch of Lux Super Rich it is even more important to understand the launch in greater detail in terms of the effect of the media on the purchasing of the brand. In order to examine the media effectiveness in more detail, and for the purpose of this case study we will look at the information from a Pantene media planner's perspective as this brand has had the biggest impact due to the launch of Lux Super Rich.

To demonstrate how media mix can be more sharply focused on consumers exhibiting specific category behavior it is important to segment the consumer into different set of groups. We have created a set of consumer who purchased Pantene in January to March 2003 (given the purchase interval of the category is just under two months, hence choose a base period marginally larger than the inter purchase interval) and those who did purchase a shampoo product in April to June 2003. Within this set of consumers we created groups that exhibited any of the following behavior:
- Continued to purchase Pantene over Apr-June'03 (PP)
- Purchase Lux over Apr-June'03 (PL)
- Purchase a brand other than Lux /Pantene (PO)

It would be ideal to compare the PP group with the PL group since it would contrast all those past Pantene buyers who stayed with Pantene over the first three months of Lux launch from those who chose to try Lux over the same period.
However, the un weighted samples for the PP and PL groups are less than 30, hence cannot use this data at this point of time to compare these two groups on different parameters, be it demographic descriptors or media behavior.

We have, therefore, looked at the following two groups:
- Any Lux buyer over Apr – Jun'03 (Lux)
- Pantene buyers over Jan – Mar'03, who did purchased a shampoo over Apr – Jun'03 (PS)

We have only looked at the PS set of consumers, as opposed to Pantene users over Jan-Mar '03, as we wanted to exclude those who, for some reason were not in the market to buy a shampoo over Apr-June'03 when Lux was launched.

3.0   Differences in media behavior between the Lux group and the PS group

Given the two groups, we now need to understand the differences if any in the media behavior of these two different set of consumers on the different media forms, Television, Print, Radio and Out of Home. The next set of tables does exactly that.

Firstly, the results of the comparison of TV viewership by channel (Table V).   As it can be seen on channels viewed over the past 7 days, a larger proportion of Lux triers had viewed ATV World compared to the PS group. The remaining TV viewership habits between the two sets of consumers are fairly constant.

Table V - Lux Tries vs Pantene Users - Channel viewed in past 7 days		
	% Viewership (viewed in Past 7 days)	
Channels	Lux Triers (Apr-Jun 03)	Pantene Users Jan-Mar 03, and who purchased shampoo in Apr-Jun 03.
TVB Jade	96	97
ATV Home	73	75
TVB Pearl	67	64
ATV World	42	32

Base: Lux Triers: Lux Super Rich buyers in April to June 2003
Pantene Users: Pantene buyers in January to March 2003 and who bought any shampoo in April to June 2003.

Comparing the readership, there is a significant proportion of Lux triers as compared to the PS group, that are Apple Daily and Oriental Daily readers. This is highlighted in Table VI. The remaining two newspapers have a similar readership between the two sets of consumers.

Table VI - Lux Tries vs Pantene Users - Newspaper read		
	% Reading newspapers regularly (5+ times per week)	
Newspapers	Lux Triers (Apr-Jun 03)	Pantene Users Jan-Mar 03, and who purchased shampoo in Apr-Jun 03.
Oriental Daily News	33	24
Apple Daily	31	19
The Sun News	6	7
Ming Po Daily	1	3

Base: Lux Triers: Lux Super Rich buyers in April to June 2003
Pantene Users: Pantene buyers in January to March 2003 and who bought any shampoo in April to June 2003.

Still in print but now concentrating on magazines, there are no stark differences on the readership of magazines between the two groups, except for a slighter larger proportion of PS consumers who read Eat & Travel Weekly. This is highlighted by Table VII.

Table VII - Lux Tries vs Pantene Users – Magazines read		
	% Reading magazines (once per month or more)	
Magazines	Lux Triers (Apr-Jun 03)	Pantene Users Jan-Mar 03, and who purchased shampoo in Apr-Jun 03.
Next Magazine	10	8
Sudden Weekly	23	26
Easy Finder	7	10
Eat & Travel Weekly	25	33
TVB Weekly	10	10

Base: Lux Triers: Lux Super Rich buyers in April to June 2003
Pantene Users: Pantene buyers in January to March 2003 and who bought any shampoo in April to June 2003.

When examining the radio behavior between the two sets of groups, you can notice that Lux triers have a slightly higher tendency to listen to the radio. The average hours spent listening to the radio in a day for Lux triers is 2.3 hours vs 2.1 hours for the PS group. This results into 12 extra minutes of radio listening for a Lux triers vs the PS group. Given the weight of listership of the two groups, do they listen to the same stations or is there a difference? Table VIII highlights that there is a greater proportion of Lux triers as compared with that of PS groups that are RTHK 2 listeners.

Table VIII - Lux Tries vs Pantene Users - Stations listened

	% Listening to a station (in the past 7 days)	
Station	Lux Triers (Apr-Jun 03)	Pantene Users Jan-Mar 03, and who purchased shampoo in Apr-Jun 03.
Commercial Radio 1	22	29
Commercial Radio 2	16	19
RTHK 1	11	19
RTHK 2	26	20
Metro Showbiz	10	8

Base: Lux Triers: Lux Super Rich buyers in April to June 2003
          Pantene Users: Pantene buyers in January to March 2003 and who bought any shampoo in April to June 2003.

The final table below (table IX) compares the two groups on where they saw an Out of Home advertising in the last month. A much greater proportion of PS group had seen advertising on the MTR as compared with the Lux trier group. Only a slightly higher proportion of Lux triers have seen Out of Home advertising on a Minibus as compared with that for the PS group.

Table IX - Lux Tries vs Pantene Users - OOH ad viewing

	% Listening to a station (in the past 7 days)	
Outdoor	Lux Triers (Apr-Jun 03)	Pantene Users Jan-Mar 03, and who purchased shampoo in Apr-Jun 03.
Bus	87	93
Mini-bus	50	43
MTR	58	83
Taxi	42	49

Base: Lux Triers: Lux Super Rich buyers in April to June 2003
          Pantene Users: Pantene buyers in January to March 2003 and who bought any shampoo in April to June 2003.

Overall after comparing the media behaviors of the two different groups, we are able to summarize that the Lux triers when compared to the PS groups are more of:
- ATV World viewers
- Apple Daily readers
- RTHK2 listeners
- Minibus exposed

This implies that these media vehicles will provide a much sharper, and, therefore, very efficient targeting of early triers of Lux.

4.0   Conclusion and Next Steps

The Lux case study has clearly highlighted that the Media habit data, when superimposed on the category behavior data of the same respondents, can give us rich insights on the media behavior of groups exhibiting a certain category behavior pattern. Given the need to minimize the time spent by the Homescan panelist to complete the media habits questionnaire, the results and measures can not be as detailed and rigorous as the converntional syundicated media measurement (e.g. Media Index). However, the differences observed between groups exhibiting different category behavior can give us valuable directions for identifying media that can reach one of these groups more efficiently.

As a continuation of the results presented here, we would relook at the PP and PL groups once we have received the panel purchase data for the month of August. We hope that the unweighted sample for PP and PL groups sill be larger than 30 once we expand the purchase period from Apr- June'03 to Apr-Aug'03. The comparison between PP and PL groups is likely to bring out the differences between those Jan-Mar'03 Pantene buyers who chose to try Lux versus those who chose to stay with Pantene. These results will be presented at the Boston symposium.