A CRITICAL EVALUATION OF THE CONTRIBUTION OF PSYCHOGRAPHIC MEASURES AS DESCRIPTOR VARIABLES IN THE PROFILING OF MARKET SEGMENTS FOR A SPECIFIC INDUSTRY

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APPENDICES

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APPENDIX A

THE SOUTH AFRICAN FRESH MUSHROOM INDUSTRY

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THE SOUTH AFRICAN FRESH MUSHROOM INDUSTRY

Introduction

Appendix A focuses on the fresh mushroom industry in South Africa. Section I provides an overview of the development of the market in South Africa.

Section 2 details the size and growth trends in the fresh mushroom market. It will highlight the problem facing Tongaat Mushrooms and the need for a market segmentation study amongst existing mushroom users.

Sections 3 and 4 provide an overview of the location of business and competitors in the industry.

Section 5 outlines the demographic profile of current mushroom users and how changing lifestyles may impact upon their food selection and preparation. In the final sections 6-8, the author details the product, pricing and promotional strategies adopted by various producers in the industry.

1. Market Development

In the sixty's the South African mushroom industry was in its infancy. Fresh product was only available on a limited basis and the quality of the product was generally poor due to inadequate storage and transportation facilities. In addition, consumers treated the product category with caution. They were particularly wary of fresh mushrooms and were ignorant as to their preparation and use. In fact, most sales were confined to the canned variety.

Over the past thirty years, however, mushroom farming has developed into a technologically advanced industry. The fresh market today is worth in excess of R85 million per annum and employs vast sums of capital and labour.

The mushroom industry in South Africa is characterised by the dominance of one major producer - Tongaat Mushrooms. Tongaat Mushrooms have successfully dominated the market since their entry in 1969 and have largely been responsible for the positive growth rate in the market.(Average volume growth rate of 13% over six years 1985-1991). (Tongaat Mushrooms Marketing Plan 1991/1992).

Tongaat Mushrooms have invested large sums of money in educating the consumer as to the preparation and use of mushrooms. This has resulted in a gradual acceptance of the product by the consumer and ultimately led to growth in the industry in the last decade.

The company has farms in three major metropolitan areas, namely Johannesburg, Cape Town and Durban and two canneries based in Johannesburg and Cape Town. Tongaat Mushrooms supply fresh product nationwide. They are the only competitors in the industry to offer national distribution and hence are the only company in a position to market national brands. All other competitors in the industry focus their efforts on growing for and supplying the local market where they are based.

Specifically there are four medium sized 'regional' competitors in the Transvaal; two in Natal and one each in the Western Cape and Eastern Cape and a number of very small producers.

Tongaat Mushrooms, in addition to investing funds in developing the market, have also kept pace with the technological advances made in mushroom farming. Specifically over the last seven years they have invested large sums of capital and upgraded the production systems on all of their farms. This investment has resulted in the following benefits:

1) Dramatic increase in supply of fresh mushrooms, both volume and consistency. Supply can now be tailored to meet peak selling periods.
2) Improved quality of the product in the case of fresh mushrooms which resulted in improved shelf life.
3) Improved yields per square metre of production and therefore greater profitability per kilogram harvested.

The regional competitors have also expanded their production over the last 5 years in order to meet the demands of the growing market.

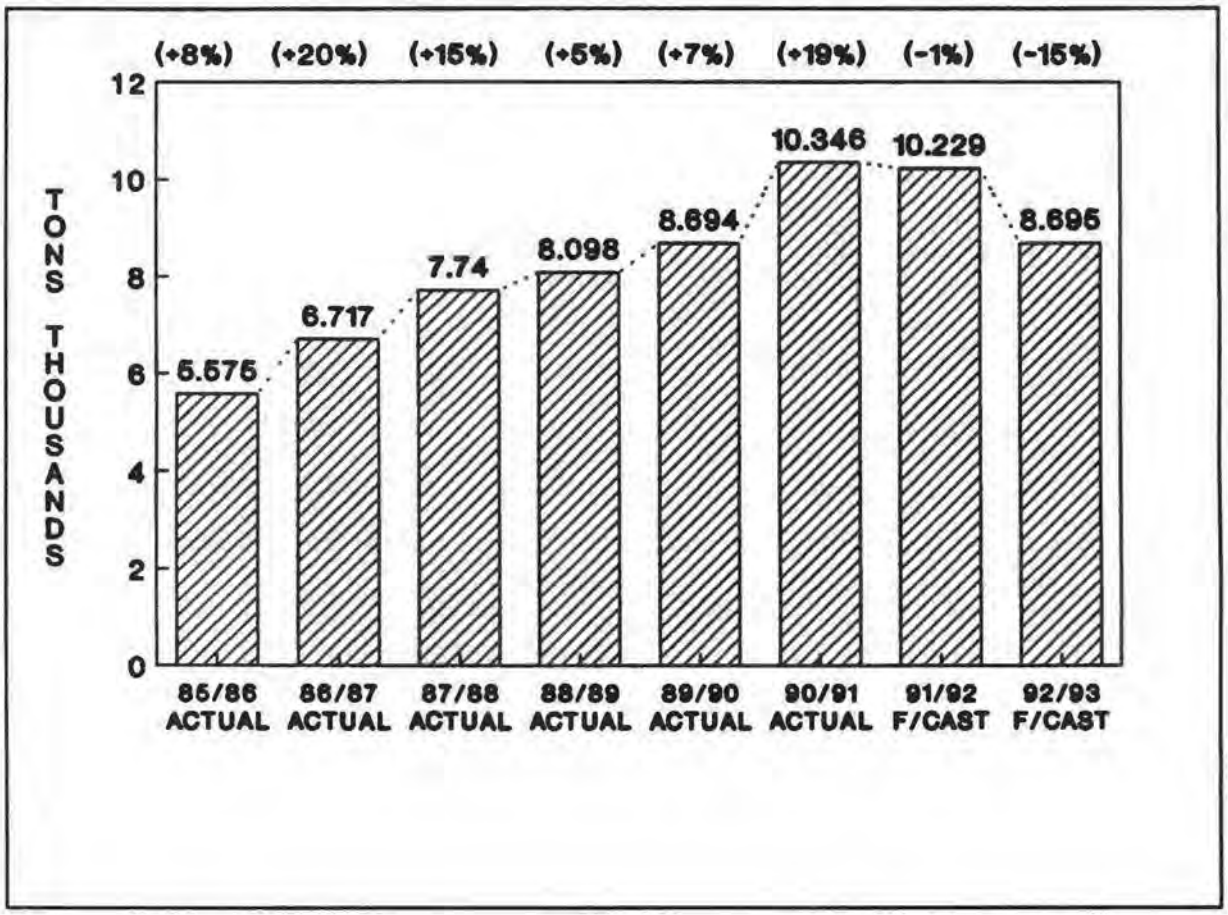
2. Market Size and Growth Trends

2.1 Market Size

The South African fresh mushroom market was estimated to be worth R85 million in 1990/1991. In volume terms this equates to 10306 tonnes (Tongaat Mushrooms Marketing Plan 1990/1991).

2.2. Market Growth Trends

Figure 1: South African Fresh Mushroom Market Growth Trends



Source: Tongaat Mushrooms Marketing Plan 1990/1991

The fresh mushroom market (Refer Figure 1) grew at an average rate of 13% per annum in real volume terms from 1985-1991. These are significant growth figures

and represent a market that has undergone a rapid rate of expansion over the last six years.(1985-1991)

The reasons cited for the growth in the market are as follows:

1) Improvements in the quantity and quality of supply of fresh mushrooms.
2) Aggressive pricing tactics by competitors forcing retail selling prices below the inflation rate.
3) Major marketing effort by Tongaat Mushrooms resulting in increased consumer knowledge with respect to the preparation and use of fresh mushrooms.

Figure I, however, clearly reveals that for 1991 and 1992 the market growth is forecast to level off and in fact a sharp decline of 15% in market volumes is forecast for 1992/1993.

Tongaat Mushroom's management hypothesize that the decline in growth in the market is primarily due to the current recessionary period in South Africa. In addition, they are concerned that their main target market may be saturated. 'We are concerned that the per capita consumption in the traditional 'white market' may already have peaked'. Tongaat Mushrooms have, however, conducted no formal market research to substantiate either of these facts.

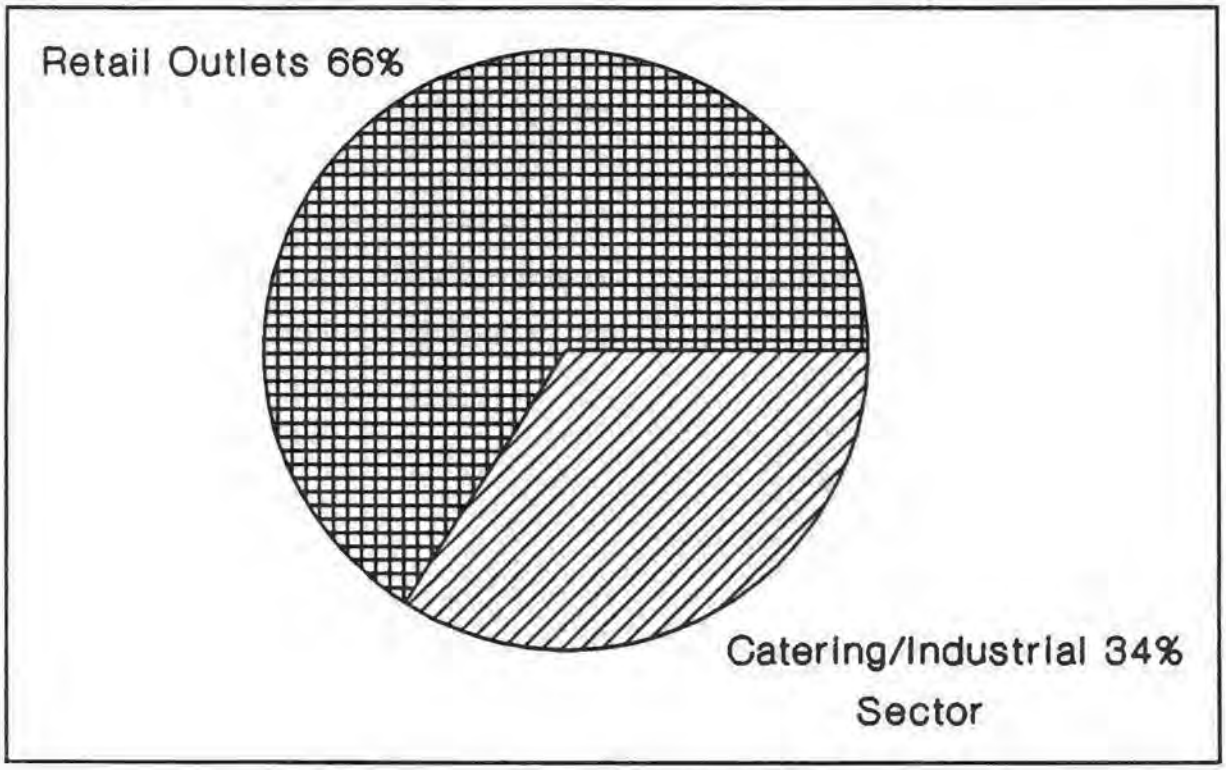
Tongaat Mushrooms would obviously like to halt the decline in growth and stimulate the growth of the mushroom market. Tongaat Mushrooms are, however, concerned that their current marketing strategy may not be appropriate. In addition, they are uncertain as to who in their current target market they should focus their promotional efforts on in order to increase consumption of fresh mushrooms. It is for these reasons that Tongaat Mushrooms have elected to conduct a market segmentation study amongst existing users of fresh mushrooms. The market segmentation study (to be based on volume of use) if implemented correctly should provide Tongaat Mushrooms with a greater understanding of

current mushroom users and what differentiates heavy users from light users of fresh mushrooms. Based on the findings of the study, Tongaat Mushrooms wish to evaluate their current marketing strategy in the light of the decline in market growth that is forecasted for 1992/1993.

3. Market Location

Figure 2 reveals that the Fresh Mushroom Market Volumes are divided between retail outlets, accounting for 66% and industrial/catering outlets accounting for the balance = 34%.

Figure 2 Market Location of Fresh Mushrooms by Distribution Sector



Source: Tongaat Mushrooms Marketing Plan 1990/1991

Specifically fresh mushrooms are distributed to the consumer via the traditional major retail outlets and smaller independents (e.g. greengrocers). Catering/industrial business is primarily restaurants and fast food outlets.

Fresh Mushrooms are available nationally. The location of business by region is presented in Table 3.

Table 3 Market Location - Fresh Mushrooms by Region

Region	Share of Market
Transvaal	48%
Natal	22%
Cape	30%
TOTAL	100%

Source: Tongaat Mushrooms Marketing Plan 1990/1991

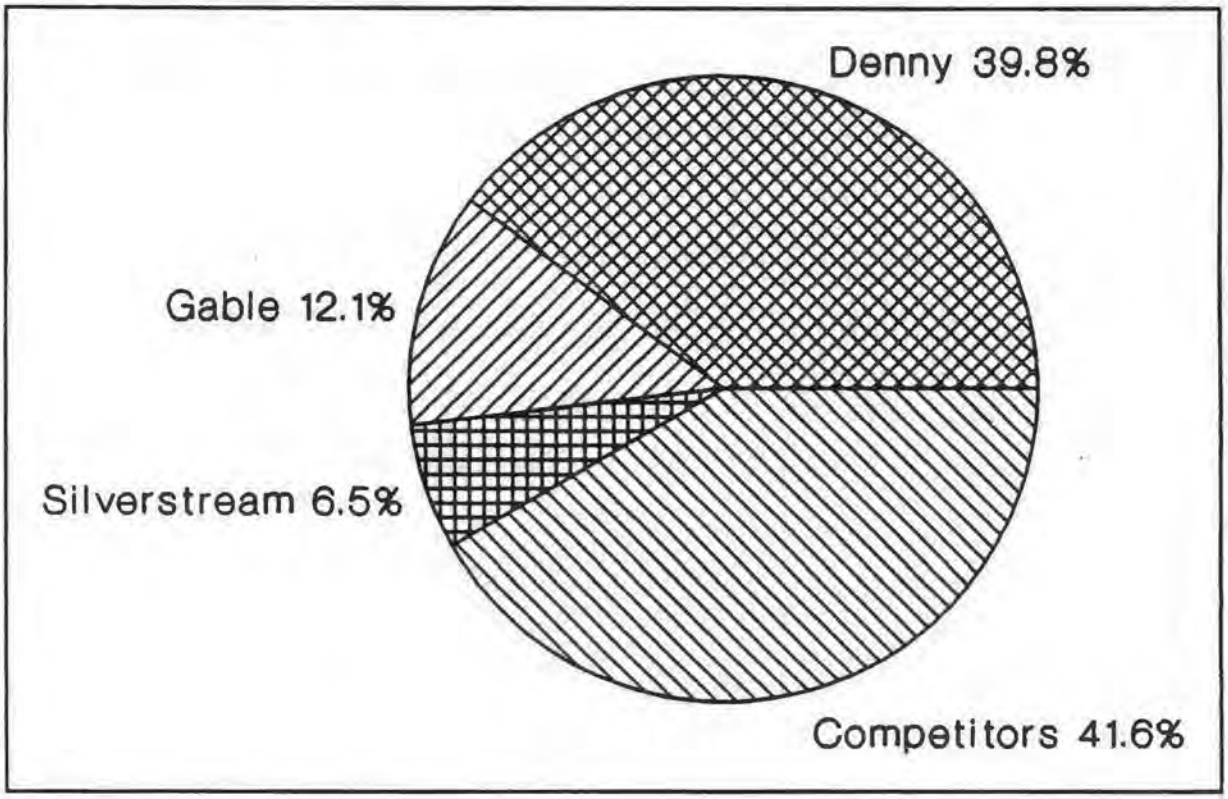
Note: The above figures are based on Tongaat Mushroom 1990/1991 sales statistics. It is postulated, however, that the national market figures would not differ greatly from these. Transvaal (including Orange Free State) account for close to half the Market Volumes. The Cape accounts for a disproportionably high percentage at 30%, followed by Natal at 22%.

4. Competitive Market Analysis

Tongaat Mushrooms markets three national brands : Denny, Gable and Silverstream.

Cumulatively these three brands dominate the fresh mushroom market and account for 58.2% of total business. (Refer Figure 4 below) The brand leader is Denny, accounting for 39,8% of total market volumes. Silverstream has a small share equal to 6,5% and Gable is reserved for the catering market. The regional competitors together account for 41,8% of the total market (Refer Figure 4 below).

Figure 4 Market Shares



Source: Tongaat Mushrooms Marketing Plan 1990/1991

The regional competitors are all individually relatively small (Refer Table 5 below).

Table 5 Regional Competitive Volumes and Market Share

Region	Brands	Volume (Ton's)	% Market Share
Transvaal	Highveld	975	9,5
	Meadow	507	5,0
	Country	749	7,3
	Cordon Bleu	273	2,7
	Other*	63	0,6
Natal	Chef	333	3,3
	Chanterelle	156	1,5
	Other*	270	2,6
W.Cape	Medallion	702	6,9
E.Cape	Chelsea	156	1,5
	Other*	73	0,7
TOTAL		4257	41,6%

(* No. of very small competitors in each region who predominantly supply local farmstalls/greengrocers or canneries with stock.)

Source: Tongaat Mushrooms Marketing Plan 1990/1991

There has, over the last 5 years, been an increase in the number of competitors to the market place as well as an expansion in the competitor's production capacities.

The management of Tongaat Mushrooms believe that the market became seriously overtraded in 1990/1991. This factor has been compounded by the recent reversal in the growth trend as detailed in Section 2.

5. The South African Mushroom Consumer

In June 1990 Tongaat commissioned Research Surveys to conduct research amongst consumers in their target market. The main findings are presented in this section

5.1 Demographic Profile of Mushroom Consumers

Fresh Mushrooms are predominantly consumed by upper and middle income white households. There is a slight bias towards English speaking households. The author believes that there are a number of changes affecting the lifestyle(s) of these households, particularly with regard to food preparation and consumption. Specifically the author feels that the trends towards healthy lifestyles has direct relevance to this study. 'Healthy' eating patterns focus primarily on reduced red meat consumption; avoidance of foods high in cholesterol and animal fats, balanced diets with fresh products, avoidance of artificial ingredients and reduced kilojoule intake. In addition, there are an increasing number of South African women joining the workplace and the time available to them for purchasing and preparing food is therefore limited. This impacts on her attitude towards convenient and easy prepared meals. The author therefore hypothesizes that psychographic information could be of use in a segmentation study of the fresh mushroom market particularly for distinguishing between heavy users and light users of fresh mushrooms.

5.2 Usage Habits

Main reasons cited for using fresh mushrooms were taste and versatility. Nutritional considerations were not cited as important. Tables 6 and 7 reflect the usage occasions and situations cited by fresh mushroom users.

Table 6 Usage Occasions for Fresh Mushrooms

USAGE OCCASIONS	% OF RESP.
Family Supper	79%
Entertaining	49%
Braai	46%
Lunch	32%
Breakfast	31%
Snacks/Other	14%

Table 6 reveals that Mushrooms are consumed most frequently at family dinners but are also enjoyed at Braai's, Lunches, Breakfasts and when Entertaining

Table 7 Usage Applications for Fresh Mushrooms

Usage Situations	% of Resp.
Salads	48%
Stews	41%
Sauces	40%
Stirfry	39%
Braai	33%
Pasta	32%
Pizza	32%
Breakfast	28%
Omelette	27%
Fried/Grilled	23%
Pies	23%
Vegetables	20%
Main Meal	14%
Starter	13%

Table 7 reveals that mushrooms are used in a variety of different ways.Salads followed by Stews and Sauces are however the most popular usage applications for fresh mushrooms.

5.3 Per Capita Consumption

Tongaat Mushrooms estimates per capita consumption of mushrooms per annum (1991) (white market) to be as follows:

Fresh	1.83 kg
Canned	0.37 kg
Total	2.20 kg / capita / annum

Per capita consumption rates for 'advanced' mushroom countries (eg. UK/Canada/Holland) is estimated at 2,5 kg - 3,5 kg/annum.

The author noted in section 2 that Tongaat Mushrooms were concerned that the per capita consumption of fresh mushrooms amongst the white market may be saturated but comparing the international figures with the South African per capita consumption rate, as described above, it appears that there is still potential for an increase in the consumption of mushrooms amongst the white population. The black segment of the market is still largely underdeveloped and this also represents a definite market opportunity for the industry.

6. Product and Packaging

6.1 The Cultivation of Mushrooms

Mushrooms are cultivated all year round in a completely controlled environment. Mushroom farming is not dependent upon weather conditions and thus mushrooms are not a seasonal product. Mushrooms are however highly perishable requiring effective chilled storage, and have limited shelf life. Simplified, the process of growing mushrooms is as follows:

1) Under laboratory conditions, spores are germinated and produce threadlike tubes, the 'mycelium'.
2) For easy handling, this is grown onto grains of cereal and is known as mushroom spawn.
3) The spawn is sown into specially prepared compost in large aluminium shelves in climatically controlled growing rooms.
4) The spawn then has to establish itself in the compost.
5) The compost is then topped with a layer of peat, to allow the mushroom to develop and grow.
6) 2-3 weeks later the first 'flush' of mushrooms is ready for picking.
7) Once harvested another 'flush' will break every 7-10 days. The main crop is harvested in the first 3 weeks.
8) After harvesting, mushrooms are packed and distributed via the cold chain to the retail outlets. Shelf life is approximately 3-4 days.
9) The complete cycle takes approximately 13 weeks.

6.2 Nutritional Properties

Mushrooms are described as a 'healthy' food. The reasons are as follows: Mushrooms are rich in water soluble B group vitamins and minerals and contain more proteins than most other vegetables. This protein is also better quality than other vegetable protein as it has a good balance of most of the essential amino acids. Mushrooms contain no sugar or starch and only a trace of fat; they are cholesterol free. Mushrooms are also low in kilojoule content - containing only 10 Kj/25g.

6.3 Risk of Poisoning

Since mushrooms are a member of the 'fungi' family, there has long been the association of fear of poisoning as can occur with some wild varieties. The cultivated mushrooms pose no such threat however as they are grown in a completely controlled environment.

6.4 Product Types

There are 3 types of fresh mushrooms currently available on the South African Market - Refer Table 8 below.

Table 8 Product Types

Product Type	% Share of Business
Buttons	70%
Browns	20%
Braai	10%
TOTAL	100%

Source: Tongaat Mushrooms Marketing Plan 1990/1991

The most popular mushroom type is the white button accounting for 70% of the market volumes.

Some smaller producers have introduced 'speciality varieties' (e.g. Oyster, Shitaki) onto the market. These have however experienced low levels of consumer trial.(Mr A.E. De Waal - Tongaat Mushrooms)

6.5 Brands

Mushrooms fall into the category of fresh produce - more specifically they are classified as a vegetable. Vegetables on the South African market are generally not branded.

Fresh mushrooms are the 'exception to this rule'. In fact, all mushrooms sold on the South African market are branded. As the author noted in section 4 of this chapter, there are two national consumer brands both of which belong to Tongaat Mushrooms. Research conducted for Tongaat Mushrooms in June 1990 revealed that brand awareness is relatively high for the two national brands. (Refer Table 9 below)

Table 9 Brand Awareness for Fresh Mushrooms

		AIDED AWARENESS	
BRANDS	SPONTANEOUS AWARENESS	NATIONAL	REGIONAL
Denny	98%	100%	-
Silverstream	29%	70%	-
Woolworths	14%	51%	-
Gable	9%	26%	-
Highveld	7%	15%	29%
Medallion	5%	14%	44%
Meadow	4%	13%	-
Chanterelle	4%	9%	30%
Cordon Bleu	4%	17%	-
Chef	4%	15%	36%
Country	3%	20%	-

Source: Research Surveys June 1990

Table 9 reveals that Denny has a high spontaneous and aided awareness. This result is not surprising as the brand is well established and receives national

advertising support. Tongaat Mushrooms believe that the Denny brand provides a significant barrier to potential new entrants in the fresh mushroom market. Silverstream also scores relatively well despite the lack of formal advertising. Within each of the regions the smaller brands have achieved only a moderate level of aided awareness.

6.6 Packaging

6.6.1 Pack Sizes

Mushrooms are available to the consumer in various pack sizes: 200g - 250g Buttons, Browns and Sliced

400g - Braai

6.6.2 Merchandising and Display

Fresh mushrooms require refrigerated shelf space and are merchandised in the fresh produce section of the supermarket.

Fresh mushrooms are predominantly sold in prepacked plastic punnets with clear shrinkwrap film. The brands are differentiated from one another by means of the label, punnet shape and colour.

7. PRICING

Fresh mushrooms retailed at an average of R14.00 per kilogram for the first six months of 1992. This price is significantly higher than most other vegetables. In addition to being more expensive than most other vegetables, mushrooms do not experience the seasonal fluctuations experienced by other fresh produce exposed to the vagaries of weather.

7.1 Brand Pricing

The brand leader, Denny, is priced at a premium.

Table 10 Average Retail Selling Prices - Fresh Mushrooms(June 1992)

Brand	Av.Brand Price\250g Punnet
Denny	R3.29 - R3.79
Silverstream	R3.19 - R3.39
Regional Competitors	R2.99 - R3.39

Table 10 reveals the following:

Denny is on average at a 15% premium to regional competitors and at a 7,5% premium to Silverstream.

The pricing strategy adopted by Denny is in line with that of its premium quality positioning (Refer Section 8).

The regional competitors have over the past two to three years adopted a more aggressive pricing strategy. Over key selling periods, their retail selling prices have been recorded at 25% below that of Denny.

8. Promotion

8.1 Background

Denny, the market leader, is the only brand to be supported by formal national advertising. Historically, the brand was positioned on a 'freshness' platform. Specifically the consumer promise was 'Denny Mushrooms - Always Morning Fresh'. The desired consumer response was 'Denny mushrooms are the freshest mushrooms on the market'. The brand received extensive media support on television, radio and in female magazines. The result was the development of a strong brand awareness and brand image for Denny. In addition to the formal branded advertising, Tongaat invested large sums of money to educate the consumer on the preparation and usage of mushrooms. According to Mr A de Waal, this had direct bearing on the growth of the market following consumers acceptance of the product and confidence in preparing them.

8.2 Current Advertising Strategy

In 1987 Tongaat decided to change their communication strategy. They wished to further stimulate the market by encouraging the wide usage of mushrooms for all occasions and situations. A new consumer promise was developed 'Now You're Really Cooking' emphasizing the versatility and taste of cooking with Denny mushrooms.

8.3 Target Market

The current advertising campaign is directed at upper and middle income white females aged 24+ responsible for grocery shopping.

8.4 Creative Strategy

The creative execution of both print and television portrays an 'up market' image. The campaign attempts to position Denny Mushrooms as a superior 'out of the ordinary' type product. All recipes tend to the more exotic and expensive versus everyday usage. Examples of the specific usage situations and occasions depicted in the advertisements are presented as an addendum at the end of Appendix A.

8.5 Sales Promotion

The regional competitors focus their activities on trade promotions versus consumer promotions. They specifically allocate funds to cooperative advertising that is price/volume based over key selling periods. This in turn also generates goodwill from the retail trade.

ADDENDUM TO APPENDIX A

EXAMPLES OF CURRENT ADVERTISING

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IT'S GOT THE POTATO FOILED.

Good heavens, what's about to happen to the good old South African braai?

Morning Fresh Denny, that's what.

Simply wrap up our succulent giant browns with some herbs and butter. Then bake, braai or put on the coals for a surprise that opens your eyes.

Mushroom copacabana

Or get really inventive with these dishes.

MUSHROOM COPACABANA Ingredients: 4 slices toast, 4 slices pineapple, 1 egg, 1 cup breadcrumbs, 1 Camembert cheese sliced into 4 rounds, 2 tablespoons butter. (Serves 4)

Method: Dip the cheese into beaten egg. Crumb and fry in butter until golden brown. Place pineapple slice on toast, then Camembert and cover with mushroom cream sauce. (See below.) Garnish with parsley and serve.

Sauce: 200 g Denny button mushrooms, 1 tbsp margarine, ½ onion finely chopped, 125 ml dry white wine, 125 ml fresh cream, Fondor, black pepper, 1 tsp oreganum.

Method: Sauté onion until glazed and tender. Add mushrooms. Sauté for another 2 mins. Add wine, season and cook for another 2 mins.

Add fresh cream and let sauce evaporate until creamy or bind with beurre manié. Garnish with parsley and asparagus.

MUSHROOM CHICKEN KEBAB Ingredients: 2 medium green peppers, 200 g Denny button mushrooms, 2 chicken breasts.
Sauce: 125 ml tomato sauce, 65 ml Worcestershire sauce, 35 ml chutney, 1½ level tsp brown sugar, 12 ml honey, 12 ml oil, 1 crushed clove garlic, 5 ml English mustard, 125 ml vinegar.

Method: Mix all sauce ingredients and bring to the boil. Cube chicken and green peppers and skewer with button mushrooms. Season to taste. Grill the kebabs.

Mushroom chicken kebab

Pour over the sauce, sprinkle with chopped parsley and serve.

For more party tricks, outdoors or in, write away right away for your free recipe book.

It's called Now you're really Cookin', because that's what happens with Morning Fresh Denny. Write to Denny, Box 67486, Bryanston 2021, Tvl. And break away from the everyday.

Morning Fresh DENNY

NOW YOU'RE REALLY COOKIN'

BERNSTEIN, LOKTON, GOLDING & KLEIN 203/1814RH

IN SOUS STAAN "S" VIR "SAMPIOEN".

Daar is 'n wonderlike bestanddeel "S" wat 'n sous sommer sprankelnuut maak - en dit is niks anders as sampioene nie! Verrassende, smaaklike oggendvars Denny.

Ons bros wit knopies en sappige bruin sampioene het al menige souse die kool werd gemaak.

Sampioene se delikate geur gee 'n sous iets baie besonders. En ook 'n tekstuur wat die mond laat water. Spring sommer nou weg en berei 'n sous met spesiale bestanddeel "S".

SAMPIOEN-ROOMSOUS. Bestanddele: 400 g Denny knopiesampioene, fyngemaak, Aromat en suurlemoenpeper, 1 teelepel gemengde kruie, 50 g botter of margarien, 125 ml witwyn, 1 klein uitjie, fyn gekap, 125 ml ekstrak, 250 ml vars room, 1 teelepel beurre manié. (Maak omtrent 350 ml)

Metode: Verhit die botter en soteer die uie. Voeg die sampioene, geurmiddels en kruie by. Soteer vir 'n paar minute. Voeg die ekstrak en wyn by. Verminder met een derde, voeg die vars room by en laatkook. Verdik met beurre manié en laat prut vir 'n paar minute. Proe vir smaak.

CHASSEUR-SOUS. Bestanddele: 400 g Denny bruin sampioene, gekerf, 50 g botter of margarien, 1 klein uitjie, fyn gekap, 1 teelepel gemengde kruie, 4 tamaties, geskil en gekap, 1 sopie brandewyn, 1 koppie rooiwyn, 500 ml basiese bruinsous. (Maak omtrent 500 ml)

Metode: Verhit die botter en soteer die sampioene. Voeg die tamaties en geurmiddels by en dan die kruie. Brand met die brandewyn, voeg die rooiwyn by en verminder die sous met een derde. Voeg dan die bruinsous by en laat vir 'n paar minute prut. Proe vir smaak.

Nog baie heerlike sousverrassings wag vir u. Blaai eenvoudig deur 'n boek met watertand sampioenresepte – die titel is "Nou kook jy éérs."

Skryf aan Denny, Posbus 67486, Bryanston 2021, en sluit 2 etikette (of redelike kopieë) van ingemaakte of vars Denny sampioene in.

Makliker of lekkerder kan dit nie. U geregte gaan nog heerliker as ooit tevore smaak.

Oggendvars DENNY

NOU KOOK JY ÉÉRS

APPENDIX B

QUESTIONNAIRE

QUESTIONNAIRE - FINAL

1	2	3

INTERVIEWER'S NAME: _____ QUESTIONNAIRE No:

==========

Name of Respondent: _____

Address : _____

_____

Code : _____

Telephone no. : (W)_____ (H)_____

For Office Use Only

4 [ ]

Region (Tick) :

AREA ZONE (TICK)

TRANSVAAL 1 [ ]

PRET. 1	W/RAND E/RAND 2	SANDTON JHB. 3	VAAL 4

5 [ ]

NATAL 2 [ ]

SOUTH COAST 1	DURBAN N/COAST KLOOF / WESTVILLE 2	PIETER-MARITZ-BURG 3

6 [ ]

CAPE 3 [ ]

MILNERTON N. SUBURBS 1	S. SUBURBS/ SEAPOINT 2

7 [ ]

Shopping Centre/Outlet : _____

==========

1.

Hello, my name is _____.
We are conducting a survey on various topics (related to food/groceries) and I wonder if I might ask you a few questions- it will only take about 20 minutes. Are you willing to participate ?

IF NO OR IN DOUBT, CLOSE INTERVIEW

2.

We are looking for people who work for certain companies. Do you or any member of your family or close friends work for a:

	YES	NO
Market Research Company	[ ]	[ ]
Advertising Agency	[ ]	[ ]

IF YES TO ANY, CLOSE INTERVIEW

For Office Use Only

3.

When last were you or any member of your family interviewed for market research purposes ?

Within the last 3 months	☐	→ CLOSE INTERVIEW
More than 3 months ago	☐	→ CONTINUE

4.

Are you responsible for the daily grocery purchases of the household ?

Yes	☐	→ CONTINUE
No	☐	→ CLOSE INTERVIEW

5.

Now, I'd like to talk about usage of fresh mushrooms in your household. How much and how often are mushrooms used in your household ?

(Hand respondent card)

Please tick appropriate block.

1 or more punnets a week	1	☐
1 - 3 punnets a month	2	☐
Occasionally use, but less than one punnet a month	3	☐
Never use fresh mushrooms	4	☐

☐ 8

(IF NEVER USED, PLEASE CLOSE INTERVIEW)

For Office Use Only

6.

Which of these Brand(s) of fresh mushrooms do you know of or have you heard of ?
Hand respondent card. Record under (6) on grid below.

7.

Which brand of fresh mushrooms do you use MOST regularly/often ?
Record under (7) on grid below. (Single mention only).

8.

Which other brand(s) (if any) do you ever use ?
Record under (8) on grid below (Multiple mention possible).

Brands		(6) Aided Aware	(7) Most Often	(8) Ever Use
Meadow	1			
Silverstream	2			
Cordon Bleu	3			
Medallion	4			
Chanterelle	5			
Denny	6			
Chef	7			
Highveld	8			
Country	9			
Woolworths/Princess	10			
None/don't know	11			

(6)		(7)		(8)	
	9				22
	10				23
	11	20	21		24
	12				25
	13				26
	14				27
	15				28
	16				29
	17				30
	18				31
	19				32

NB : For Questions 6 + 8 :
Blank = 0
Tick = 1

For Office Use Only

9.

In what way do you serve mushrooms MOST OFTEN ?
Single mention only. Hand respondent card.

NB :
For ques. 10
Blank = 0
Tick = 1

10.

In what other ways do you serve mushrooms ?
Multiple mention possible.

33 34

	MOST OFTEN		OTHER WAYS		
Starter/Hors-d'oeuvre		1			35
As a meal on its own		2			36
In stews and casseroles		3			37
In sauces with meat/fish/chicken		4			38
As a vegetable with meat/fish/chicken		5			39
In salads		6			40
Fried/grilled on toast		7			41
Fried/grilled with breakfast food (eg. bacon and eggs)		8			42
In omelettes		9			43
On pizzas		10			44
In pasta sauces (eg. Spaghetti/Alfredo)		11			45
In curries		12			46
In soups		13			47
In/As stir-fry		14			48
Stuffing in meat/chicken/other veg		15			49
In pies/pastries		16			50
As a fondue		17			51
On the braai		18			52
Substitute for meat		19			53
Rice dishes		20			54
Other (specify .....)		21			55

For Office Use Only

11.

Which meal do you serve mushrooms at MOST OFTEN ?
Single mention only. Show respondent card.

NB :
Ques. 12
Blank = 0
Tick = 1

12.

At which other meal occasions would you serve mushrooms ?
Multiple mention possible.

	MOST OFTEN		OTHER MEAL OCCASIONS		
					56
Breakfast		1			57
Lunch		2			58
Family dinner		3			59
Between meal/pre-meal snacks		4			60
Braai		5			61
Entertaining guests to lunch/dinner		6			62
Other (Specify .....)		7			63

13.

Where do you normally purchase your fresh mushrooms ?
(Single mention only.)

Supermarket	1	
Greengrocer	2	
Farmstall	3	64
Local cafe/Superette	4	
Other (specify .....)	5	

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14.

When shopping for FRESH mushrooms, please indicate your level of agreement with the following statements. (Hand respondent card)

SDA = strongly disagree; DA = disagree; N = neither agree nor disagree; A = agree; SA = strongly agree

Please TICK the appropriate box.

		1 SDA	2 DA	3 N	4 A	5 SA	
1.	I always stick to the same brand through sheer force of habit.						65
2.	I am willing to pay a little extra for the best quality brand on the shelf.						66
3.	I always re-purchase the same brand because I am so satisfied with it.						67
4.	Because of the 'potential risk' in purchasing mushrooms I always confine my selection to the well known brands.						68
5.	There is very little difference between brands of mushrooms, so I often switch brands depending on price, quality, etc.						69
6.	I often purchase mushrooms on the spur of the moment.						70
7.	I usually purchase the lowest priced brand on the shelf.						71
8.	I prefer to buy "save", "bulk economy" packs of mushrooms.						72
9.	I usually select the brand my family/ friends purchase.						73
10.	I am always keen to try new "varieties" of mushrooms.						74
11.	If mushrooms are on special, then I always buy them.						75
12.	I always check the weight of the package evaluating the price accordingly.						76
13.	The appearance of the product is the major factor in influencing my brand selection.						77
14.	I always include mushrooms on my shopping list.						78
15.	I choose the mushrooms that are the freshest, regardless of the brand.						79

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15.

Please Select and Rank the 3 most important benefits you/your family derive from consuming/cooking with fresh mushrooms :

(1 = Most important benefit; 2 = Second most important benefit; 3 = Third most important benefit.)

Hand respondent card.

1.	Quick and easy to prepare and use.	1
2.	Good value for money.	2
3.	Healthy - containing no animal fats/cholesterol, etc.	3
4.	Taste delicious.	4
5.	Non fattening - containing zero calories.	5
6.	Adds that something "extra special" to a recipe.	6
7.	Natural - free of any artificial additives/colourants, etc.	7
8.	Very versatile and can be used in so many different ways.	8
9.	Nutritious - containing important vitamins, minerals, etc.	9
10.	"Extend" a meal making it go further.	10

80 | | | 4 1stB

5 | | | 6 2ndB

7 | | | 8 3rdB

Questionnaire No.:

1	2	3

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16.

The following attributes apply to Fresh Mushrooms. Please select the 3 attributes that are most important in influencing you when you select a pack of Fresh Mushrooms and rank in order of importance.

1 = Most important attribute
2 = Second most important attribute
3 = Third most important attribute.

Hand respondent card.

ATTRIBUTES		RANK
1. Established brand name	1	
2. Price	2	
3. Quality	3	
5. Freshness	4	
6. Size	5	
7. Packaging	6	

NB :
9 = 1st Attrib.
10 = 2nd Attrib.
11 = 3rd Attrib.

	9
	10
	11

17.

I am now going to read out some statements that could apply to Fresh Mushrooms. For each statement please tell me which of the brand(s) of mushrooms that you most associate with it. You may choose as many brands as you feel like, or none if you feel none apply. Please rate only those brands that you were aware of.

Tick Brand(s) of Mushrooms aware of (Question 6)	BRANDS OF MUSHROOMS										
ATTRIBUTES	MEDALLION	CHEF	CHANTERELLE	HIGHVELD	SILVERSTREAM	MEADOW	DENNY	CORDON BLEU	WOOLWORTHS / PRINCESS	COUNTRY	NONE / DON'T KNOW
Always fresh											
Consistent good quality											
Too expensive											
Good cheaper alternative											
Stay freshest/keep the longest											
Worth paying a little extra for											
Attractive packaging											
Often stale in shop											

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(Ques. 17)

NB :
Blank = 0
Tick = 1

12										
23										
34										
45										
56										
67										
78			80	4						

v

1	2	3

Questionnaire No. :

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18.

Category Beliefs/Perceptions (Fresh Mushrooms)

The following statements all pertain to fresh mushrooms. Please indicate your level of agreement with the following statements :

SDA = strongly disagree; DA = disagree; N = neither agree nor disagree; A = agree; SA = strongly agree.

Hand respondent card.

Please TICK the appropriate box.

		1 SDA	2 DA	3 N	4 A	5 SA	
1.	I would serve mushrooms in place of red meat for a family meal.						12
2.	Mushrooms are tasty and add delicious flavour to a dish.						13
3.	Mushrooms are just an everyday 'vegetable'.						14
4.	There is still a potential risk of poisoning in mushroom purchases today.						15
5.	Mushrooms can be used in very many different ways.						16
6.	Mushrooms are a luxury.						17
7.	Mushrooms are nutritional containing important vitamins, minerals, etc.						18
8.	Mushrooms are expensive.						19
9.	Mushrooms are non-fattening.						20
10.	Mushrooms are convenient/quick and easy to prepare.						21
11.	Mushrooms are not suitable food to serve the whole family.						22
12.	Mushrooms don't last in the fridge - they go off in a day or two.						23
13.	Mushrooms are for use at special occasions/entertaining only.						24

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	1 SDA	2 DA	3 N	4 A	5 SA		
14. Mushrooms have a subtle flavour that blends in well with most dishes.							25
15. Mushrooms cook away to nothing.							26
16. Mushrooms are healthy because they have no cholesterol/harmful fats, etc.							27
17. Mushrooms make a meal go further.							28
18. Mushrooms are high in fibre.							29
19. You can't take a chance with mushrooms - if they go off they could make you really ill.							30
20. Mushrooms turn an ordinary dish into something a little bit "extra-special".							31

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19.

The following statements pertain to varying cooking 'styles'.

Please indicate your level of agreement with the following statements.

SDA = strongly disagree; DA = disagree; N = neither agree nor disagree; A = agree; SA = strongly agree.

Hand respondent card

Please TICK the appropriate box.

		1 SDA	2 DA	3 N	4 A	5 SA	
1.	I enjoy inviting family/friends to my home for meals, braais, etc.						32
2.	My major hobby is cooking and baking for family/friends.						33
3.	I love to cook dishes that express my distinct personality and talents.						34
4.	I enjoy reading through my recipe book.						35
5.	Winning my family's/friends praise for my cooking is important to me.						36
6.	I spend as little time as possible in the kitchen.						37
7.	My friends often come to me for advice on recipes/new foods, etc.						38
8.	Cooking for family/friends is an important part of my life.						39
9.	I spend a lot of time talking with neighbours/friends about recipes and cooking.						40
10.	I often write in and make use of free recipe book offers.						41
11.	I often experiment with new recipes and find new and interesting ways of preparing food.						42
12.	The main reason that we eat out is that it saves 'cooking' time.						43

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		1 SDA	2 DA	3 N	4 A	5 SA		
13.	People come to me more often than I go to them for info on cooking ideas/ recipes, etc.							44
14.	When I give a dinner party, I feel my guests will judge me by the food I serve.							45
15.	I get most of my new recipe ideas from magazines.							46
16.	I have better ways to spend my time than in grocery shopping and cooking.							47
17.	I often seek out the advice of my friends/relatives regarding recipes.							48
18.	Cooking allows me to be very creative and I frequently enjoy preparing novel dishes.							49
19.	I select only those recipes from magazines that are simple and for which I have the ingredients.							50
20.	I like to spend most of my free time at home cooking for family/friends.							51
21.	I sometimes influence what recipes/ ingredients my friends use.							52
22.	I feel disappointed in myself when my dinner is a flop.							53
23.	I frequently entertain guests/friends for meals/snacks, etc.							54
24.	I often select and read magazines for recipe ideas.							55
25.	I must admit I really don't like "everyday" cooking.							56
26.	My life is centred around the kitchen.							57
27.	I really enjoy planning and preparing meals when entertaining.							58
28.	I would like a maid to do the cooking.							59

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	1 SDA	2 DA	3 N	4 A	5 SA	
29. My friends/relatives usually give me good advice on recipes/new foods, etc.						60
30. Most of the recipes in the magazines are too complicated with long lists of ingredients.						61

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20.

The following statements pertain to general cooking habits.

Please indicate your level of agreement with the following statements.

SDA = strongly disagree; DA = disagree; N = neither agree nor disagree; A = agree; SA = strongly agree.

Hand respondent card

Please TICK the appropriate box.

		1 SDA	2 DA	3 N	4 A	5 SA		
1.	When it comes to a choice between nutrition and taste in my family meal planning, I put nutrition first.							62
2.	I frequently cook and love to do so.							63
3.	I try and avoid cooking with foods high in animal fats and cholesterol.							64
4.	I work to a set budget when shopping and planning family meals.							65
5.	I especially enjoy preparing gourmet and exotic dishes.							66
6.	I am very aware of the amount of calories in food ingredients when preparing a family meal.							67
7.	I avoid all foods that contain colourants/artificial flavours and additives.							68
8.	I prefer meals that can be prepared quickly.							69
9.	Dishes cooked in wine and sauces appeal to me.							70
10.	I would say I'm 'economy minded' when it comes to preparing the family meal.							71
11.	I am primarily concerned with providing nutrition for my family when planning meals.							72
12.	I love to prepare meals from basic ingredients.							73

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	1 SDA	2 DA	3 N	4 A	5 SA	
13. I try and limit my family's calorie intake by cooking with ingredients/ foods low in kilojoule content.						74
14. I always check the labels of foodstuffs for artificial preservatives, chemical ingredients, etc.						75
15. I prepare many of my meals/side dishes in the microwave to save time.						76
16. The main value of food should be in its nourishment rather than in its taste or flavour.						77
17. I carefully take into account the cost of food ingredients when planning a family meal.						78
18. I like to use only natural wholesome foods when preparing my family's meals.						79
19. I try and cut down on the family's red meat consumption by preparing more meals with fish/chicken/pasta, etc.						80
20. I like to prepare ethnic dishes (eg. Mexican/Chinese) with exciting novel tastes.						4
21. I am always concerned with the amount of calories when selecting food items.						5
22. I really appreciate and frequently use convenience foods.						6
23. It is more important to choose foods with the proper nutrients, vitamins and minerals than foods which can be enjoyed for their various tastes.						7
24. When cooking I always do it the best way, even if it takes longer.						8
25. My primary concern when purchasing food is the cost and value for money the ingredient/food offers.						9
26. I am aware of the need to limit my family's cholesterol intake.						10
27. I am interested in and frequently use spices, herbs & seasoning in my cooking.						11

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	1 SDA	2 DA	3 N	4 A	5 SA		
28. I am very aware of artificial chemical ingredients in processed foods.							12
29. My primary concern when purchasing food for myself is the amount of calories it contains.							13
30. There is a definite need to include fresh/raw products in family meals.							14
31. I don't think I could get by without convenience foods.							15
32. I really enjoy preparing food for the family.							16
33. I buy and consume <u>personally</u> more low calorie foods than the average housewife.							17
34. At home we usually eat quickly prepared meals rather than more carefully prepared dishes of various flavours.							18
35. It is my responsibility to keep my family fit and healthy by serving nutritious meals.							19

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21.

Could you please tell me into which age group you fall ?
Hand respondent card.

You need only tell me the letter of the alphabet corresponding to your group.

A	18 - 24 years	1	
B	25 - 34 years	2	
C	35 - 49 years	3	
D	50 - 59 years	4	
E	60 + years	5	

	20

22.

What language do you speak most often at home ?

English	1	
Afrikaans	2	

	21

23.

Could you please tell me into which group your TOTAL monthly household income falls ?
Hand respondent card.

(By monthly household income, I mean the total of all the incomes earned by all the wage earners living in your house, before deductions. You need only read me the number corresponding to the income group into which you fall.)

1.	Up to R699 per month	1	
2.	R 700 - R1199 per month	2	
3.	R1200 - R1999 per month	3	
4.	R2000 - R2999 per month	4	
5.	R3000 - R3999 per month	5	
6.	R4000 - R4999 per month	6	
7.	R5000 - R5999 per month	7	
8.	R6000 or more per month	8	

	22

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24.

Do you work ..... ?

Full time	1	
Part time	2	
Housewife/'Home Manager'	3	
Unemployed	4	
Retired	5	
Student	6	

23

25.

Which of the following statements best describes your family situation at the moment ?
Hand respondent card.

a.	I am single and have never been married	1	
b.	I am single but have been married and have no children	2	
c.	I am married and have no children	3	
d.	I am widowed/divorced but my children do not live at home with me	4	
e.	I am married and my children have grown up and left home	5	
f.	I am widowed/divorced and my children have grown up and left home	6	
g.	I am married and my children still live at home	7	
h.	I am widowed/divorced and my children still live at home	8	

24

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26.

How many children under the age of 16 do you have living in your household ?

One	1	
Two	2	
Three	3	
Four	4	
Five +	5	
None	6	

25

27.

Including yourself, how many members are there in your household ?

One	1	
Two	2	
Three	3	
Four	4	
Five	5	
Six	6	
Seven	7	
Eight +	8	

26

APPENDIX C

RESPONDENT PROFILE

APPENDIX C

DETAILED ANALYSIS OF THE SAMPLE PROFILE

1. Geographic Profile

Table 11 Location of Respondents by Area

	No. of Respondents	%
Transvaal	166	41%
Natal	83	21%
Cape	153	38%
TOTAL	402	100%

The research was confined to the 3 major metropolitan areas of PWV, Durban and Cape Town. These areas currently account for close to 85% of national fresh mushroom volumes. In this way the majority of the market was represented. In addition the Cape was heavily weighted due to time and cost constraints.

2. Demographic Profile

This section outlines the demographic profile of respondents. Data was collected on respondents language, age, income, work and family status. It pertains to questions 21-27 in the questionnaire (Refer Appendix B)..

In certain instances in this section, when detailing findings, comparison is made to a syndicated study. This study was commissioned by Tongaat Mushrooms in June 1990. Respondents were white females, aged 18+, in major metropolitan areas. The objective of the study was to develop a demographic profile of fresh mushroom users and to establish awareness, usage and preference patterns. The results of this study are used as a base of comparison when presenting the data in order to validate the sample profile of this research report.

2.1 Language (Question 22, Refer Appendix B).

Table 12A

Language Profile of Respondents

	No.of Resp.	%
English	262	65%
Afrikaans	140	35%
TOTAL	402	100%

Table 12B

Syndicated Study - Language Profile

	No.of Resp.	%
English	347	54%
Afrikaans	295	46%
TOTAL	642	100%

The national consumption of fresh mushrooms is skewed towards english speaking households . The respondents in this study are skewed more heavily to english (65%) due to the focus on metropolitan areas only and the weighting to the Cape region (Refer table 12A). The skew is, however, in line with national consumption for fresh mushrooms (Table 12B).

2.2 Age (Question 21. Refer Appendix B).

Table 13A

Age Profile of Respondents

	No.of Respondents	%
18 - 24	41	10%
25 - 34	111	28%
35 - 49	146	36%
50 - 59	62	16%
60+	42	10%
TOTAL	402	100%

Table 13B

Syndicated Study - Age Profile

No.of Resp.	%
64	10%
212	33%
225	35%
141	22%
642	100%

The sample is again similar in profile to that of the syndicated study (Table 13B).. The majority (64%) of respondents are in the 'middle age' bracket (i.e. 25 - 49 years) as it is primarily these respondents who account for a high percentage of TOTAL grocery shopping. All other age categories are, however, adequately represented.

2.3 Income[1] (Question 23, Refer Appendix B)

Table 14A

Income Profile of Respondents

	No.of Resp.	%
R0 - R1999 (D)	48	12
R2000 - R3999 (C)	119	30
R4000 - R5999 (B)	131	33
R6000 + (A)	104	26
TOTAL	402	100%

Table 14B

Income Profile Syndicated Study

Syndicated Study.Income Profile	
No.of Resp.	%
96	15
206	32
237	37
103	16
642	100%

The sample is skewed to the upper income brackets with 59% of respondents falling into the A and B income groups (Table 14A). This is in line with the national consumption of fresh mushrooms and as per the syndicated study (Table 14B).

[1] TOTAL Household income before deductions.

2.4 Work Status (Question 24, Appendix B).

Table 15 : Work Status Profile of Respondents

	No. of Respondents	%
Full Time	192	48%
Part Time	70	17%
Housewife	114	29%
Unemployed	5	1%
Retired	21	5%
TOTAL	402	100%

Despite both the skew to the upper income brackets and the high number of respondents (50%) having children under the age of 16 years, 65% of the sample worked either full time or part-time (Table 15). This is in line with the authors view of the growing trend of increasing numbers of women now in the workplace.

2.5 Family Status (Question 25,26 and 27, Refer Appendix B).

Table 16A
Stage in Family Life Cycle

Stage in Family Life Cycle	No. of Resp	%
Single/Never Married	34	9%
Married/No Children	36	9%
Married/Child.@ home	226	56%
Married/Child.grown up	48	12%
Single/Child.@ home	29	7%
Widowed/Divorced/No children at home	29	7%
TOTAL	402	100%

Table 16B
Number of Children <16yrs at home

No.of Child-ren <16 yrs	No. of Resp	%
one	70	17%
two	90	22%
three	30	8%
four	9	2%
none	203	51%
TOTAL	402	100%

Table 16C
Household Size

No.of Members in Household	No.of Resp.	%
one	27	7%
two	108	27%
three	68	17%
four	108	27%
five	54	13%
six	29	7%
seven	6	2%
eight+	2	0%
TOTAL	402	100%

The majority of respondents are married with children at home. However, 23% of the sample is made up of single respondents, either never-married or widowed\divorced (Table 16A).

Those that had children (less than 16 years) at home had in the main only one (17%) or two (22%) (Table 16B). This is further reinforced by the finding for TOTAL household size (Table 16C). The sample is generally represented by smaller size households - 27% being 2 member households and a further 44% being 3 or 4 member households.

3. Behavioral Profile

The data in this section measures the respondents behavioral patterns with respect to fresh mushrooms. Volume of use was measured in order to assess the number of heavy, medium and light users in the sample. Questions 9-12 assessed how and when mushrooms were used by the respondents. Question 13 measured where mushrooms were most usually purchased. In addition to general behavioral patterns, question 6-8 measured consumers' behaviour with respect to the brands of mushrooms on the market.

3.1 Product Usage

3.1.1 Volume of Use(Question 5, Refer Appendix B).

Table 17 User Profile

USAGE RATE	NO. OF RESPONDENTS	%
Heavy Users (1+ Punnet/week)	202	50%
Medium Users(1-3 Punnets/month)	146	36%
Light Users (< 1 Punnet/month)	56	14%
TOTAL	402	100%

Analysis of the data reveals that half of the sample falls into the heavy user category (Table 17). (i.e. 50% of respondents eat one or more punnets of fresh mushrooms per week).

The remainder of the sample is divided into medium and light users with 36% consuming an average 1-3 punnets\month and 14% consuming less than 1 punnet\month.

It can be concluded from this analysis that heavy users are indeed accounting for large percentages of TOTAL fresh mushroom volumes. However, one may also conclude that at least 50% of current users of fresh mushrooms could, if correctly targeted, be stimulated to increase their volume of consumption of fresh mushrooms.

3.1.2 Usage Situations (Question 9 & 10, Refer Appendix B).

Table 18 Usage Situation

	Single* Choice only (N = 402)	Multiple # Choice Possible	Cumulative
Alternates	Most Frequent Usage Situations	Other Usage Situations	
As a vegetable accompaniment	22%	49%	71%
Salads	17%	65%	82%
Stews	14%	74%	88%
Sauces	10%	65%	75%
Breakfast	7%	54%	61%
Stirfry	6%	68%	74%
Pasta	4%	43%	47%
Starter	4%	42%	46%
Braai	3%	59%	62%
On Toast	3%	44%	47%
Pizza	2%	55%	57%
Main Meal	2%	27%	29%
Rice	2%	53%	55%
Omlettes	2%	65%	67%
Stuffing	1%	27%	28%
Soup	0,5%	32%	32,5%
Meat Replacement	0,5%	11%	11,5%
Curry	0%	16%	16%
Pies	0%	35%	35%
Fondue	0%	22%	22%
TOTAL	100%		

* = Mutually Exclusive

\# = Non Mutually Exclusive

Results depicted in Table 18 provide evidence of the versatility of mushrooms.

Most frequently however, mushrooms are served as a vegetable, in stews, salads and sauces.

3.1.3 Usage Occasion (Question 11 and 12, Refer Appendix B)

Table 19 Usage Occasion

	Single* Choice Only	Multiple# Choice Possible	Cumulative
Meal Occasions	Most Frequent Usage Occasion N=402	Other Usage Occasions	
Family Dinner	69%	23%	92%
Breakfast	11%	47%	58%
Lunch	8%	45%	53%
Outdoor	6%	56%	62%
Entertaining	5%	66%	71%
Snacks	1%	14%	15%
TOTAL	100%		

* = Mutually Exclusive
\# = Non Mutually Exclusive

The most frequent occasion at which mushrooms are consumed is the family dinner (Table 19).. Mushrooms, however, are also frequently used when entertaining (71% of sample), outdoor/ braaing (62% of sample) and to a slightly lesser extent at breakfast and lunch (58% and 53% respectively).

Again one may conclude that mushrooms, since they offer such variety, can be consumed at a variety of meal occasions. The exception to this appears to be that of 'snacking'. Mushrooms are

certainly not used frequently as in-between meal snacks.

3.1.4 Purchase Location (Question 13, Refer Appendix B).

Table 20 Purchase Location

OUTLET	% of Resp. N=402
Supermarket	79%
Greengrocer	16%
Farmstall	4%
Cafe / Other	1%
TOTAL	100%

Mushrooms are predominantly purchased at supermarkets with greengrocers and farmstalls accounting for only 20% of purchasers.

3.2 Brand Awareness and Usage

Table 21 Brand Awareness and Usage

Location of Brands	Brands	MULTIPLE CHOICE POSSIBLE		SINGLE MENTION ONLY			MULTIPLE CHOICE POSSIBLE		
		AIDED AWARENESS		BRAND USED MOST OFTEN			OTHER BRANDS EVER USED		
		Total No. of Respondents	% By Region	Total No. of Resp.	% by Region	% those Aware of Brand	No.of Resp.	% by Region	% by those Aware of Brand
NATIONAL	DENNY	397	99%	282	70,1%	71%	106	26,4%	27%
Base = 402 respondents	SILVERSTREAM	271	67%	18	4,5%	7%	150	37,3%	55%
	WOOLWORTHS	247	61%	26	6,5%	10%	156	38,8%	63%
TRANSVAAL	HIGHVELD	48	29%	7	4,2%	15%	28	16,9%	58%
Base = 166 respondents	MEADOW	39	24%	1	0,6%	2%	19	11,4%	49%
	CORDON BLEU	26	16%	1	0,6%	4%	12	7,2%	46%
	COUNTRY	25	15%	2	1,2%	8%	8	4,8%	32%
NATAL	CHEF	50	60%	2	2,4%	4%	13	15,7%	26%
Base = 83 respondents	CHANTERELLE	36	43%	5	6,0%	14%	16	19,3%	44%
CAPE	MEDALLION	98	64%	11	7,2%	11%	63	41,2%	64%
Base = 153 respondents									
BASE = 402 respondents	DON'T KNOW	-	-	47	12,0%		81		
	TOTAL			402					

Table 21 reflects the awareness and usage of the different brands of fresh mushrooms. The author wishes to draw attention to the fact that there are only 3 National brands available on the market. All other brands are available on a regional basis only and the data has therefore been analyzed according.

3.2.1 Aided Brand Awareness Question 6, Refer Appendix B).

3.2.1.1 National

Analysis of the data reveals that 99% of all respondents are aware of the Denny brand of mushrooms (Table 21). This finding is reinforced by past research conducted by Tongaat Mushrooms. In the syndicated study aided awareness was in fact recorded at 100%. It could be said that the brand name 'Denny' has become synonymous with fresh mushrooms.

Silverstream, Tongaat Mushroom's second brand, also achieved a high level of brand awareness - specifically 67% of respondents were familiar with the brand - this despite the fact that it is not advertised nor does it enjoy the good distribution network that Denny has. It is nevertheless an excellent base from which to work should Tongaat Mushrooms wish to actively promote a second brand.

Woolworths achieved a somewhat more moderate level of awareness - 61%. This is disappointing in the light of Woolworths' strength as a retail outlet particularly for fresh fruit and vegetables.

3.2.1.2 Transvaal

Competitive brand scores in the Transvaal were generally low, the highest being that achieved by Highveld at only 29% (Table 21).

3.2.1.3 Natal

In this region the competition has achieved a good level of brand awareness despite the lack of advertising support. Chef in particular is well supported by the trade throughout the region.

3.2.1.4 Cape

Medallion has a good level of brand awareness in the Cape

(64%) (Table 21). The brand does however have excellent distribution through all major retail outlets and is the only opposition brand to Tongaat Mushrooms in the region.

3.2.2 Brand Usage (Table 21) (Question 8, Refer Appendix B).

Denny is the brand claimed to be used most often by 70% of the respondents. This is obviously a very positive result and is in line with market shares and volumes. It should be noted however that although the brand has almost 100% aided awareness it only commands exclusive loyalty amongst 70% of respondents.

The Silverstream brand has not developed a strong franchise for exclusive use; it is a brand however that falls into the majority of consumers evoked set of brands ever used.

Woolworths' exclusively loyal customers numbered only 6.5%. This could well be due to the premium price image associated with the brand.The Woolworths brand is, however, still used, at least on occasions, by 39% of the sample.

On a regional basis, Highveld in the Transvaal, Chanterelle in Natal and Medallion in the Cape were the only brands that had developed a modest degree of loyal users.

It must be stressed that, while Denny is the brand that has the strongest level of brand loyalty, almost all the other brands enjoy a fair percentage of trial and\or occasional use. In particular, Highveld and Meadow in the Transvaal, Chanterelle in Natal and Medallion in the Western Cape all could be said to fall within the consumers 'evoked set',

4. Psychographic Profile

In this section the author will outline the psychographic profile of the respondents, specifically in relation to fresh mushrooms. Six measures of psychographics were included in the questionnaire. Four of these were specific to the product category of fresh mushrooms; namely product/brand attribute preferences and associations, category beliefs, benefits sought and buying behaviour towards fresh mushrooms. Two of the measures were relevant to the activity surrounding the use of fresh mushrooms; -namely, value orientations and role perceptions with regards to home cooking. Each of the six measures were operationalised through a number of statements generated and selected in the exploratory phase of this research. All of the measures made use of a Likert scale except in the case of benefits and product attribute preferences where the respondents were required to RANK their responses. The six psychographic measures pertain to questions 14-20 in the questionnaire. (Refer Appendix B).

4.1 Product and Brand Attribute Association

This construct attempts to measure consumers perceptions of the importance of various attributes associated with fresh mushrooms that would be likely to influence product and/or brand selection. In addition, it attempts to measure the respondents perceptions towards the various brands in the marketplace with respect to various salient attributes.

4.1.1 Product Attribute Association (Question 16, Refer Appendix B).

Respondents were required to select and rank in order of importance the 3 product attributes they felt were most important in influencing their purchase of a pack of fresh mushrooms. The results are presented in Table 22.

Table 22 Salient Product Attribute Association

							Base = 402	
	FIRST ATTRIBUTE SELECTED		SECOND ATTRIBUTE SELECTED		THIRD ATTRIBUTE SELECTED		CUMUL-ATIVE	
ATTRIBUTES	No. of Resp	%	No. of Resp	%	No. of Resp	%	No. of Resp	%
Freshness	226	56%	118	29%	35	9%	379	94%
Quality	78	19%	143	36%	80	2%	301	75%
Price	56	14%	76	19%	117	29%	249	62%
Brand Name	37	9%	18	5%	62	15%	117	29%
Size	3	1%	34	8%	70	17%	107	26%
Packaging	2	1%	13	3%	38	10%	53	14%
TOTAL	402	100%	402	100%	402	100%		

The data in Table 22 reveals clearly that **freshness** is the single most important attribute in influencing purchase. 56% of respondents rated it of primary importance with a further 29% rating freshness as the second most important attribute.

The attribute of quality was also rated highly by consumers, however, it appears to be perceived as less important than the attribute of freshness. 19% of respondents rated quality of primary importance and 36% rated quality as the second most important factor influencing product purchase.

Price is a third important factor that consumers take into account. It may

not be the most important factor influencing purchase but certainly is considered after the freshness\quality attributes by the majority of the sample. In the authors opinion then, should two brands on the shelf be perceived to be the same in term of freshness/quality, then price will be a key determinant of which the brand is selected.

Analysis of the data reveals that established brand name is not rated by the sample as being of primary or secondary importance. In fact, only 9% of respondents rated it as the most important attribute, with a further 5% and 15% rating it either second or third in importance. One may therefore conclude that the majority of respondents (71%) do not rate brand name as being an important factor in influencing their purchase. It reinforces the importance that consumers place on freshness and quality versus a brand name and has important implications for Tongaat Mushrooms in terms of long term marketing strategies.

Size of the product and packaging were also not rated by respondents as being of particular importance in influencing their product choice.

In summary then, the Top 3 attributes in order of importance to be associated with the purchase of mushrooms were:

1) Freshness - Overall Rating - 94%
2) Quality - Overall Rating - 75%
3) Price - Overall Rating - 62%

4.1.2 Brand Attribute Association (Question 17, Refer Appendix B).

Respondents were required to identify which brands they associated with which attributes. 7 Attribute Statements were included. The results are detailed in Table 23.

Table 23 Brand Attribute Association

Region	Brands	No.of Resp. Aware of Brand	ASSOCIATED PRODUCT ATTRIBUTES													
			Always Fresh		Consistent good Quality		Too Expensive		Good Cheaper alternative		Stays fresh\keeps longest		Worth paying extra for		Attractive Packaging	
			No. Rated$	% Aware#	No. Rated	% Aware	No. Rated	% Aware	No. Rated	% Aware	No. Rated	% Aware	No. Rated	% Aware	No. Rated	% Aware
National	Denny	397	199	50%	241	*61%	36	9%	88	22%	146	37%	154	39%	98	25%
Base = 402	Silverstream	271	61	*22%	61	*22%	17	6%	34	12%	25	9%	28	10%	26	10%
Respondents	Woolworths	247	171	*69%	167	68%	93	38%	6	2%	103	42%	158	64%	88	36%
Transvaal	Highveld	48	15	31%	14	29%	1	2%	18	*38%	9	19%	4	8%	4	8%
Base = 106	Meadow	39	6	*15%	6	*15%	1	2%	2	5%	2	5%	4	10%	1	2%
Respondents	Cordon Bleu	26	4	*15%	3	11%	1	4%	2	8%	2	8%	4	*15%	2	8%
	Country	25	6	*24%	5	20%	0	0%	0	0%	1	4%	2	8%	0	0%
Natal	Chef	50	15	*30%	11	22%	2	4%	7	14%	5	10%	4	8%	7	14%
Base = 83	Chanterelle	56	6	17%	8	*22%	2	5 %	4	11%	1	3%	4	11%	0	0%
Respondents																
Cape	Medallion	98	22	22%	21	21%	13	13%	23	*24%	9	9%	9	9%	14	14%
Base = 153																
Respondents																
Don't Know				114%		70%		274%	258		178		122		242	
% of Total				28%		17%		68%	64%		44%		30%		60%	
Sample N=402																

$ No. Rated = Number of respondents who rated the attribute. Non Mutually exclusive. (i.e. Respondents may select as many or as few attributes as liked).

% Aware = % of Respondents who were aware of the brands that rated the particular attribute.

* = Most frequently rated attribute for each brand.

Analysis of the data reveals that there are relatively low attribute associations with respect to each of the various brands (Table 23). It appears that consumers are not strongly aware of the particular attributes that each of the brands possesses. The three national brands are perhaps the exception to this but even with respect to the brand leader, Denny, no particularly salient attribute association can be said to be 'owned' by the brand.

Taking the above into account, a profile of each brand follows: (Refer Table 23).

4.1.2.1 National Brands

- Denny

  Denny is perceived by at least half the sample to be 'always fresh' and 61% of respondents rate the brand as one of consistent good quality. It is not perceived as being a premium/expensive brand and in addition 39% of respondents stated that it would be a brand worth paying extra for. In the authors opinion,it may be concluded from the data,that Denny has a quality image offering good value for money.

- Silverstream

  Silverstream does not have a clear brand positioning in the mind of the consumer. It is perceived by only 22% of the sample to be always fresh/good quality. Furthermore, Silverstream does not have the positioning of a 'good cheaper alternative or value for money brand'.

- Woolworths

  The brand is perceived to be 'always fresh' by 69% of respondents who are aware of the brand. Woolworths has a premium quality position but is also perceived as being too expensive. It should be noted however that 64% of respondents who were aware of the Woolworths brand, felt it was worth paying extra for.

4.1.2.2 TRANSVAAL

- Highveld

  Highveld has, relative to the other brands in this region, the 'clearest' brand personality. It is most closely associated with offering the consumer a good value for money, cheaper alternative brand.

- Meadow\Cordon Bleu\Country

  Very low attribute associations are recorded for these brands The brands therefore do not possess 'distinct personalities' in the minds of the consumer.

4.1.2.3 NATAL

- Chef\Chanterelle

  Analysis of the data again reveals that neither Chef nor Chanterelle possess strong brand identities even amongst those consumers aware of the brand. Chef is however associated with freshness by 30% of consumers aware of the brand which is a positive factor. Interestingly, neither of these brands is seen to be 'cheaper' or better value for money despite their discounted pricing policies. (Refer Appendix A).

4.1.2.4 CAPE

- Medallion

  Medallion achieved a 64% awareness amongst Western Cape mushroom users and 63% stated that they had used the brand and yet the brand itself does not have a distinct personality. 22% of respondents aware of the brand, rate it as always fresh and good quality while 24% rate it as a good cheaper alternative.

In summary, the regional brands do not appear to have a clear positioning in the mind of the consumers. On a national basis, Silverstream has not developed for itself a distinct personality. Woolworths has a quality, up

market image and is a brand perceived to be worth paying extra for. Denny is perceived to be a quality brand offering good value for money. It must be noted however that the single most important attribute identified in influencing the purchase of mushrooms, namely freshness, was only associated by 50% of the respondents with Denny. One can therefore conclude that the remaining consumers who are aware of the Denny brand do not always associate it with the key attribute of freshness.

4.2 Category Beliefs and Perceptions (Question 18, Refer Appendix B).

Respondents were required to indicate their level of agreement or disagreement with 20 belief statements. The results are presented in Table 24. A discussion with respect to each of the 9 'categories' of perceptions tested, follows:

Table 24 Category Beliefs

	BASE = 402			
Perceptions of Fresh Mushrooms	% Agree	% Neutral	% Disagree	TOTAL
Mushrooms are convenient,quick and easy to prepare	99%	0%	1%	100%
Mushrooms can be used in very many different ways	99%	0%	1%	100%
Mushrooms have a subtle flavour/blend in well	97%	1%	2%	100%
Mushrooms are tasty and add delicious flavour	99%	0%	1%	100%
Mushrooms turn an ordinary dish into something 'extra special'	96%	0%	4%	100%
Mushrooms are a luxury	43%	4%	53%	100%
Mushrooms are expensive	44%	5%	51%	100%
Mushrooms extend a meal	71%	3%	26%	100%
Mushrooms cook away to nothing	31%	4%	65%	100%
Mushrooms are for use at special occasions/entertaining only	11%	2%	87%	100%
Mushrooms are just an everyday vegetable	30%	3%	67%	100%
Mushrooms are not suitable food for the whole family	18%	3%	79%	100%
Mushrooms go off quickly	27%	3%	70%	100%
Mushrooms are healthy; containing no cholesterol/ fats	90%	5%	5%	100%
Mushrooms are non-fattening	86%	4%	10%	100%
Mushrooms are high in fibre	39%	30%	31%	100%
Mushrooms are nutritional containing important vitamins and minerals	80%	10%	10%	100%
I would serve mushrooms in place of red meat for the family meal	25%	2%	73%	100%
Still potential risk of poisoning in mushrooms purchased today	16%	6%	78%	100%
Can't take a chance with mushrooms, they could make you ill	62%	8%	30%	100%

1) Convenience Perception: Mushrooms are perceived by almost all (99%) of respondents as being convenient, quick, easy to prepare and use.

2) Versatility Perception: Mushrooms are perceived as being able to be used in very many different ways by almost all (99%) of respondents. Furthermore they are believed to offer a subtle flavour which blends in with a variety of dishes (97% of respondents).

3) Taste Perception: 99% of respondents stated that fresh mushrooms had delicious flavour and when added to an ordinary recipe,managed to transform it into something a little 'extra-ordinary' (96% of respondents).

4) Value Perception: The data reveals that the respondents are divided on this issue. 43% and 44% of respondents respectively perceive mushrooms to be both expensive and a luxury. In addition 31% feel that mushrooms just cook away to nothing, implying the perception of poor value for money. In contrast,however, 71% of respondents believe that mushrooms extend a meal by their addition.Despite mushrooms being perceived by some to be a luxury,only 11% would reserve their use for special occasion consumption only.

5) Category Perception: Mushrooms are not perceived to be an ordinary vegetable by 67% of sample. These respondents do not classify and/or compare mushrooms with other vegetables such as potatoes\carrots etc. Mushrooms are however perceived to be a suitable 'food' for all family members to consume. (79%).

6) Storage Perception: Only a minority of respondents (27%) believed that mushrooms do not last long implying that mushroom consumers today are generally more confident about the storage of fresh mushrooms.

7) Health Perception: Mushrooms are perceived by the majority of respondents (90%) to be healthy and non fattening (86%).

8) Nutritional Perception: Mushrooms are perceived by 80% of respondents to be nutritional containing important vitamins and minerals. However, with respect to fibre content of fresh mushrooms, there appears to be some confusion as to consumers beliefs - 30% are neutral indicating lack of knowledge as to the facts, 39% agree mushrooms are high in fibre and the balance of respondents disagree on high fibre content. Mushrooms despite being perceived as nutritional, still, however, would only be served in place of red meat at a family meal by 25% of respondents. This implies that mushrooms are certainly not

perceived as being of sufficient 'substance' to replace meat or chicken at meal time.

9) Risk Perception: The results indicate that the category itself is still treated with caution. 62% of respondents still believed that fresh mushrooms had to be treated with caution as they had the potential to make one ill. However more than three quarters of the sample felt there was very little risk of poisoning by those mushrooms that are purchased today.

In order to examine any underlying structure that might have been present in the data and as a means of validating the author's 'hypothesized' 9 categories of perceptions detailed above, a factor analysis was performed.

The factor analysis examines the relations among the 20 measured variables, and then groups together those variables that are highly correlated. The results of the factor analysis are presented in Table 25.

Table 25

SORTED ROTATED FACTOR LOADING MATRIX - CATEGORY BELIEFS*

Category belief and Perception Statements	FACTOR 1	FACTOR 2	FACTOR 3	FACTOR 4	FACTOR 5	FACTOR 6	FACTOR 7	TOTAL
Mushrooms can be used in very many different ways	0,791	0,000	0,000	0,000	0,000	0,000	0,000	
Mushrooms are tasty and add flavour	0,730	0,000	0,000	0,000	0,000	0,000	0,000	
Mushrooms make an ordinary dish something extra special	0,636	0,000	0,000	0,000	0,000	0,000	0,000	
Mushrooms are convenient, quick and easy to prepare	0,604	0,000	0,000	0,000	0,000	0,000	0,000	
Mushrooms have a subtle flavour/blend in well	0,583	0,000	0,000	0,000	0,000	0,000	0,000	
Mushrooms are a luxury	0,000	0,761	0,000	0,000	0,000	0,000	0,000	
Mushrooms are expensive	0,000	0,666	-0,391	0,000	0,000	0,000	0,000	
Mushrooms are for use at special occasions only	0,000	0,571	0,000	0,000	0,000	0,332	0,000	
Mushrooms extend a meal	0,000	0,000	0,688	0,000	0,000	0,000	0,000	
Mushrooms cook away to nothing	0,000	0,281	-0,538	0,000	0,000	0,348	0,000	
Can't take a chance with mushrooms -> ill	0,000	0,000	0,000	0,743	0,000	0,000	0,000	
Mushrooms are high in fibre	0,000	0,000	0,000	-0,551	0,000	0,000	0,394	
Risk of poisoning in mushrooms purchased	0,000	0,000	0,406	0,583	0,000	0,273	0,000	
Mushrooms are non-fattening	0,000	0,000	0,000	0,000	0,770	0,000	0,000	
Mushrooms are healthy - no cholesterol/fats	0,000	0,000	-0,258	0,000	0,743	0,000	0,000	
Mushrooms are not food for the whole family	0,000	0,000	0,000	0,000	0,000	0,680	0,000	
Can serve mushrooms in place of meat for the family	0,000	0,000	0,000	0,000	0,000	0,000	0,829	
Mushrooms are nutritional	0,000	0,000	0,345	0,000	0,000	0,000	0,417	
Mushrooms are just an everyday vegetable	0,000	-0,364	0,000	0,000	0,000	0,472	0,337	
Mushrooms go off quickly	0,000	0,289	0,000	0,000	0,000	0,466	0,000	
Eigen Value VP	2,385	1,846	1,449	1,417	1,363	1,336	1,254	11,1
% Explained Variation	21,6%	16,7%	13,1%	12,8%	12,3%	12,1%	11,4%	100%
Cumulative % Explained Variation	21,6%	38,3%	51,4%	64,2%	76,5%	88,6%	100%	

* Note The above factor loading matrix has been rearranged so that the columns appear in decreasing order of variance explained by factors. The rows have been rearranged so that for each successive factor, loadings greater than 0,5000 appear first. Loadings less than 0,2500 have been replaced by zero.

There were seven eigen values greater than one and the seven factors selected accounted for 100% of the variance in the original 20 variables. The first two factors in Table 25 accounted for 51,4% of the TOTAL variance.

This indicates a generally high level of collinearity amongst the variables.

In order to name the factors, those variables with the largest loading (>0,5%) on each score were examined. The author has named the factors as follows:

FACTOR 1 = USAGE PERCEPTION
FACTOR 2 = PRICE PERCEPTION
FACTOR 3 = VALUE PERCEPTION
FACTOR 4 = RISK PERCEPTION
FACTOR 5 = HEALTH PERCEPTION
FACTOR 6 = FAMILY FOOD PERCEPTION
FACTOR 7 = NUTRITIONAL PERCEPTION

These 7 factors represent the respondents underlying beliefs with regards to fresh mushrooms and are described as follows:

FACTOR ONE : USAGE PERCEPTION

Factor one represents the strong belief that mushrooms are versatile, tasty and convenient to use. In the authors opinion these variables have grouped together as they all pertain to the respondents concerns with respect to meal preparation and recipe selection, i.e. usage situation. Comparing this with Table 24, it could be said that, with respect to preparation, the majority of respondents perceive mushrooms as convenient to use, with respect to recipe selection, the majority of respondents perceive them as highly versatile and finally with respect to the 'end' meal\recipe the majority perceive mushrooms to add delicious flavour, changing it from something ordinary to something a little extra special.

FACTOR TWO : PRICE PERCEPTION

The second factor pertains to that of price perception. The variables luxury,

expensive and use at special occasions are obvious groupings and pertain to the consumers perception of the price/affordability of mushrooms. Interpreting this in the content of Table 24, it appears that just over 40% of existing mushroom users perceive mushrooms to be a luxury and expensive, however, almost 90% would NOT reserve their use for special occasions only.

FACTOR THREE : VALUE PERCEPTION

The third factor is concerned with value for money. The consumers perception with respect to mushrooms extending a meal and therefore offering greater value for money is correlated negatively with that of 'cooking away to nothing'. It appears that one third of the sample do NOT perceive mushrooms to offer value for money.

FACTOR FOUR : RISK PERCEPTION

The forth factor pertains to risk perception in mushroom usage and consumption. It is interesting to note that fibre content is grouped with this factor most probably because of the ignorance surrounding the facts (see earlier comments) and perhaps the word 'fibre' itself is something the consumer is unfamiliar with (in the context of mushrooms that is). Referring to Table 24, 20% of existing mushroom users still fear poisoning in mushrooms purchased while two thirds of the sample treat the product category with caution.

FACTOR FIVE : HEALTH PERCEPTION

The fifth factor groups the two variables of 'healthy' and non-fattening together, indicating that the consumer perceives these as being closely linked. In both instances, over 85% of respondents perceive mushrooms as healthy and non-fattening (refer Table 24).

FACTOR SIX : FAMILY FOOD PERCEPTION

The sixth factor refers to family consumption. It links consumers' perception of mushrooms as an 'ordinary vegetable' with that of their perception as to whether or not its suitable food for all family members. Specifically it appears that while

the majority of respondents do perceive mushrooms suitable food for all the family (82%), they still, however, do NOT classify mushrooms as a normal everyday type vegetable (70%)

FACTOR SEVEN : NUTRITIONAL PERCEPTION

The seventh factor is concerned with the nutritional properties and links the variable concerned with the suitability of serving mushrooms in place of red meat. Referring to Table 24, it appears that while 80% of respondents do perceive mushrooms to be nutritional, they, however, do not perceive it sufficiently nutritional to replace the main meal 'protein'.

In summary, the factor analysis reveals that there are 7 broad underlying consumer perceptions with respect to fresh mushrooms. They are related to 'Usage', 'Price Perception', 'Value', 'Risk Perception', 'Health',' Family Food' and 'Nutrition'.

In comparing these 7 factors to the author's 9 hypothesized groupings there is much similarity. Specifically factor one groups together convenience and taste perceptions indicating consumers perceive both these benefits with regards to usage similarly. Likewise, the consumers perceptions with regards to healthy and non-fattening were grouped together. In addition, while mushrooms are perceived by some respondents to be a luxury, closely related to this, consumers would NOT reserve their use for special occasions only. In a similar vein, while mushrooms are perceived as nutritional, they are still NOT perceived to be sufficiently nutritional to replace meat/chicken at a family meal and hence the linking of these variables. Finally, consumers perceptions with regards to risk also linked the statement pertaining to fibre content. In summary then, the factor analysis reinforced and helped validate the authors hypothesized 9 categories of perceptions with regards to fresh mushrooms and added additional insights.

4.3 BENEFITS (Question 15, Refer Appendix B)

By including the 10 benefits statements, the researcher was attempting to measure what the respondents perceived as being the most sought after benefit to be gained from the purchase and consumption of fresh mushrooms. Respondents were required to select and rank the three benefits they perceived to be of most importance. The results of the analysis are presented in Table 26.

Table 26 Benefits Sought

BENEFIT STATEMENTS	Rated 1st Major Benefit N=402	Rated 2nd Major Benefit N=402	Rated 3rd Major Benefit N=402	Overall Weighted Rating
QUICK /easy to prepare and use	22%	13%	13%	105
Taste 'DELICIOUS'	20%	15%	13%	103
Adds 'Something EXTRA' to a recipe	16%	17%	16%	98
HEALTHY - free of cholesterol and animal fats	19%	11%	8%	87
VERSATILE	7%	13%	21%	68
NON-FATTENING;	7%	10%	5%	46
NUTRITIOUS - important vitamins and minerals	3%	6%	7%	28
EXTENDS a meal	3%	2%	8%	21
Good VALUE for money	2%	6%	3%	21
NATURAL (free of artificial additives)	1%	6%	5%	20

* Overall Weighted RATING:- In order to establish a measure of overall importance of perceived benefits a weighing factor was applied as follows : 3:2:1 for 1st Benefit : 2nd Benefit : 3rd Benefit

The respondents identified 4 major benefits to be derived from the purchase and consumption of fresh mushrooms (Refer Table 26). In order of importance (based on overall weighted rating scores) these are :

CONVENIENCE

QUICK AND EASY TO PREPARE AND USE

TASTE/ ADDS SOMETHING EXTRA

HEALTHY.

These 4 benefits were also the' top' 4 primary benefits consumers sought from the purchase and consumption of mushrooms. It can be seen from Table 26 that the number of respondents are almost evenly divided across each of the 4 main benefits sought giving rise to 4 'natural groupings' - these might be termed as follows:

1) Those who primarily use mushrooms because of the benefits offered with respect to convenience and ease of preparation (22%).

2) Those who primarily use mushrooms because of their delicious taste. (20%).

3) Those that primarily use mushrooms because of their health benefits. (19%).

4) Those that primarily use mushrooms because they add something extra special to a recipe (16%).

Both the versatility of mushrooms and the fact that they are 'calorie free' were not rated as being of primary importance by many consumers.

Mushrooms are not perceived as offering any major benefits with respect to 'economy'. They are not perceived by the consumer to offer the benefit of extending a meal nor do they offer the benefit of value for money.

Finally, the nutritious and natural properties of mushrooms were not rated as major benefits to be derived from the purchase and consumption of mushrooms.

In summary, the primary benefits sought by consumers from mushrooms were

convenience, taste, health and adding something extra special, whilst relatively low importance with regards to benefits was placed on their value for money, nutrition and non-fattening 'properties'.

4.4 PURCHASING STYLES (Question 14, Refer Appendix B)

Purchasing styles attempts to measure the consumers buying behaviour, specifically with respect to fresh mushrooms.

Table 27 Purchasing Styles

		BASE = 402			
BUYING BEHAVIOUR	PURCHASING STYLES FOR FRESH MUSHROOMS	% AGREE	% NEUTRAL	% DIS-AGREE	TOTAL
Habitual Repeat Buyer	Sticks with same brand through habit	36%	1%	63%	100%
Loyal Buyer	Re-purchase same brand because of high level of satisfaction	48%	3%	49%	100%
Independent Buyer	Little difference between brands of mushrooms on shelves therefore switch brands depending on price/quality, etc.	62%	2%	36%	100%
Conformist Buyer	Brand selection influenced by peers or family	8%	2%	90%	100%
Impulsive Buyer	Mushrooms are an impulse purchase	61%	2%	37%	100%
List Buyer	Mushrooms are always on the shopping list	49%	2%	49%	100%
Cautious Buyer	Because of 'potential risk' only select well known brands	61%	2%	37%	100%
Value Inclined Buyer	Willing to pay extra for best quality brand	86%	2%	12%	100%
	Choose mushrooms that are the freshest regardless of the brand	88%	2%	10%	100%
	Appearance is the major factor in influencing brand selection	88%	1%	11%	100%
Economy minded buyer	Usually purchase lowest priced brand on the shelf	31%	2%	67%	100%
	Always check weight/rands per kg	30%	2%	68%	100%
	When mushrooms are on SPECIAL, then always purchase	72%	2%	26%	100%
	Prefer to buy bulk/economy packs	25%	2%	73%	100%
Innovative Buyer	Like to try new varieties/products	53%	4%	43%	100%

Respondents were asked to indicate their level of agreement for 15 statements which pertained to ten shopping styles. Table 27 is a summary of the results.

1) Habitual Repeat Buyers

36% of respondents declared they purchased the same brand of mushrooms through sheer force of habit implying that the remaining respondents consciously evaluated their brand selection at point of purchase or purposely bought their usual brand or were unaware of the brand they bought.

2) Loyal Buyers

Only 48% of all respondents can be said to be truly brand loyal always repurchasing the same brand of fresh mushrooms due to their high degree of satisfaction with it.

3) Independent Buyers

Almost two thirds of respondents admitted that they noticed minimal differences with respect to the different brands on the shelf, and they therefore switched amongst these brands depending on price/quality factors.

4) Conformist Buyers

Mushrooms are certainly not a category that attracts peer pressure from family or friends, in fact 90% of respondents stated that they select their brand without influence of family and\or peers.

5) Impulse Buyers

61% of respondents stated that they purchased mushrooms on the 'spur of the moment' i.e. it was an impulse purchase.

6) List Buyers

Respondents were equally divided on this issue with 49% of the sample stating that they always had mushrooms on their shopping list.

7) Cautious Buyers

Still today, there remains a relatively high degree of perceived risk with respect to fresh mushroom purchases. 61% of respondents stated that they would confine themselves to well known brands in order to reduce their concerns.

8) Value-inclined Buyers

The majority of respondents (86%) are willing to pay a premium for the quality brand of mushrooms on the shelf. Reinforcing this finding, 88% of respondents stated that they would choose the freshest mushrooms and those whose appearance was the best regardless of the brand. This backs up the finding in Section 4.1 where established brand name scored a poor 4th position in the attribute importance rating scale versus 'freshness' which was rated first.

9) Economy Minded Buyers

31% of respondents can be said to purely base their purchase on the price of fresh mushrooms. Furthermore, 30% of respondents evaluate the brands of fresh mushrooms on the basis of 'rands per kilogram'.

However, when mushrooms are perceived to be on 'special' then this serves as a major prompt to purchase. This may well be due to the fact that mushrooms are perceived by many respondents to be a luxury and expensive (Section 4.2) and therefore when the opportunity arises to buy on special it implies a saving and a reason to purchase. Simply put ' I can afford it now and can justify buying it if it's on special'.

In contrast, bulk economy packs are not preferred by three quarters of the sample. In the authors opinion this is most probably due to mushrooms (1) being highly perishable and (2) mainly added to other dishes and therefore there is no need for big volume packs.

10) Innovative Buyers

Respondents were divided on this issue with only 50% of the sample eager to try new varieties of mushrooms or new brands. The most probable reason for this is the perceived risk still associated with the mushroom product category and this results in greater caution expressed by the consumer when it comes to new product\brand trial.

In summary, 10 buying styles were tested with respect to fresh mushrooms. Overwhelming it appears that the majority of respondents are more value driven

buyers and, reinforcing an earlier finding (section 4.1), it appears that perceptions of freshness and appearance are the major factors influencing brand choice.

This result must, however, be interpreted together with the fact that close to two thirds of respondents claimed to notice little difference between the brands and they therefore switched their brand depending on price/quality factors. This implies that two thirds of respondents do not perceive any particular brand to being the freshest and/or best quality. Again this reinforces the finding earlier where only 50% of the sample associated the attribute 'freshness' with Denny.(section 4.1)

61% of respondents claim to purchase mushrooms on impulse however, in contrast, almost half the sample did pre-plan to purchase and included mushrooms on a shopping list.

Brand loyalty appears to be fairly low in this category -less than half claim to repurchase their brand due to satisfaction, with over one third of respondents admitting to purchasing their usual brand more through habit.

While only one third of buyers are primarily influenced by price, it still appears to be a fairly 'price sensitive' category. Specifically, when mushrooms are perceived to be on 'special' this serves as a major prompt to buy.

There is still a degree of risk associated with mushroom purchases and this resulted in nearly two thirds of respondents confining their selection to well-known brands.

4.5 Value Orientations towards Home Cooking(Question 20,
Refer Appendix B)

The 35 statements in this section attempted to measure the respondents enduring values with respect to home cooking. Value orientation reflects the long term beliefs of the respondents that a particular behaviour, with regards to food selection and preparation is personally and sociably preferable to alternative behaviours.

(Refer Chapter 4, section 14). In short, the respondents 'value system' encompasses her motivations for cooking, 'tells' her what attitudes she should hold towards food selection and preparation and provides standards by which she may make evaluations of her cooking. Respondents were required to indicate their level of agreement for 35 value orientation statements. The results are presented in the Table 28 below:

Table 28 Value Orientations towards Home Cooking

	BASE = 402			
VALUE ORIENTATION STATEMENTS	% Agree	% Neutral	% Dis-agree	TOTAL
Frequently cook and love to do so	60%	9%	31%	100%
Enjoy preparing food for the family	71%	6%	23%	100%
Like to prepare meals from basic ingredients	86%	4%	10%	100%
User of Herbs/Spices and Seasoning	87%	1%	12%	100%
Enjoy cooking with wine	65%	2%	33%	100%
Like to prepare ethnic dishes	37%	5%	58%	100%
Enjoy gourmet/Exotic dishes	38%	4%	58%	100%
Responsible for family fitness and health by serving nutritious foods	89%	2%	9%	100%
Primarily concerned with providing nutrition in family meals	77%	3%	20%	100%
More important to select food for nutritional value versus taste	73%	8%	19%	100%
Main value of food is in nourishment versus taste	63%	5%	32%	100%
Aware of the need to limit family intake of cholesterol	82%	1%	17%	100%
Felt the need to reduce family's red meat intake	75%	2%	23%	100%
Avoid foods high in animal fats and cholesterol	78%	1%	21%	100%
Like to include natural wholesome ingredients	68%	5%	27%	100%
Need to include fresh/raw products in family meal	95%	1%	4%	100%
Primary concern with regards to food selection is cost + value for money	66%	4%	30%	100%
Economy minded with respect to cooking	62%	3%	35%	100%
Use a budget for shopping and food planning	35%	1%	44%	100%
Aware of cost of ingredients when food planning	53%	3%	44%	100%
Aware of chemical ingredients in processed food	66%	2%	32%	100%
Avoid foods containing artificial ingredients	36%	3%	61%	100%
Check labels for artificial ingredients	38%	3%	59%	100%
Limit family's kilojoule intake	62%	3%	35%	100%
Consciously aware of kilojoule in food when preparing meal	52%	3%	45%	100%
Concerned with kilojoule when selecting food for family	39%	4%	57%	100%
Concerned with kilojoule when selecting food for self	55%	2%	43%	100%
Buy + consume more low kilojoule food than average	32%	5%	63%	100%
Appreciate and frequently use convenient foods	29%	3%	68%	100%
Reliant on convenient foods	21%	3%	76%	100%
Frequent use of microwave to save time	35%	4%	61%	100%
Prefer meals that can be prepared quickly	72%	6%	22%	100%
Usually eat more quickly prepared meals versus dishes carefully prepared	36%	5%	59%	100%
Cook the best way even if it takes longer	71%	3%	26%	100%

From Table 28, the following general comments can be made about the respondents values with respect to home cooking

1) Firstly, a large percentage of respondents appear to enjoy cooking. Specifically, 60% frequently cook and love to do so. 71% enjoy preparing food for the family. The majority (86%) liked to prepare their family food from basic ingredients, working with herbs and spices (87%) and wine (65%). It appears however that simple, flavoursome family cooking is more popular as only a minority of respondents enjoyed more exotic cooking. Specifically only 37% and 38% respectively liked to prepare ethnic or gourmet dishes.

2) A second value orientation investigated was that of respondents attitude towards responsibility for household well-being and fitness. 89% indicated that they felt responsible for providing the necessary balanced meals to ensure family members remain in good health.

Based on the above it is then not surprising that the majority of respondents held the following specific values with respect to nutrition and health in relation to food and cooking .

1) 77% of respondents were primarily concerned with providing nutrition in planning family meals.
2) 73% of respondents felt it more important to select foods for nutritional value than taste.
3) 63% of respondents felt the main value of food was in its' nourishment versus taste.
4) 75% of respondents felt the need to reduce the family's red meat intake.
5) 78% of respondents avoided foods high in animal fats and cholesterol.
6) 82% of respondents were aware of the need to reduce the family's intake of cholesterol.

3) A third value orientation investigated amongst respondents was that pertaining to cost. 66% of respondents stated that a primary concern with respect to food selection was the cost and value for money it offered. Specifically 62% of respondents stated they were 'economy minded' when cooking, while just over half the sample (55% and 53% respectively) stated that they used a budget when food shopping and were aware of the cost of ingredients when food planning.

4) Fourthly, the respondents values towards chemical/artificial ingredients is somewhat different to that of the health/nutritional issues. While 66% of the sample were aware of artificial ingredients in processed foods only 36% consciously avoided such foods and only 38% actually checked labels for artificial ingredients.

5) The fifth value orientation concerned calorie content in food. While 62% of respondents saw the need to try and limit the family's kilojoule intake, only half the sample (52%) were consciously aware of the kilojoules in food when preparing the family meal and even less (39%) were concerned with kilojoules when selecting food for the family. Furthermore,only 55% of respondents were concerned with kilojoules when selecting food for themselves .

6) The sixth value orientation investigated respondents attitudes towards preparation and the use of convenience foods. It highlighted the following: Despite the high percentage of working women in the sample, only a small percentage (29%) valued and frequently used convenience foods. In fact, the respondents attitude towards 'time saving' appears somewhat diverse. On the one hand she has a low appreciation for convenience foods and in addition only 35% of respondents frequently use the microwave to save time and yet 72% of respondents preferred meals that could be prepared quickly.

In the authors opinion, this preference (i.e. for quick meals) is overridden by her desire (and feeling of responsibility) to satisfy the family's expectations of a well balanced complete family meal. Specifically only 36% of respondents stated that at home they often prepared 'quick meals' versus more carefully prepared meals of different flavours and 71% stated that they would cook it the best way, even if it took longer.

Based on the large number of statements (35) that had to be included to measure the construct of value orientations, and as a means of validating the authors hypothesized six value 'constructs' a factor analysis was conducted.

Table 29 presents the results of the factor analysis.

Table 29 Sorted Rotated Factor Loading Matrix * - Value Orientations

Variables - Value Orientations - Cooking	FACTOR 1	FACTOR 2	FACTOR 3	FACTOR 4	FACTOR 5	FACTOR 6	FACTOR 7	FACTOR 8	FACTOR 9	FACTOR 10	TOTAL
Concerned with Kilojoule when selecting food for family	0,800	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	
Concerned with Kilojoule when selecting food for self	0,731	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	
Aware of Kilojoule in food when preparing family meal	0,680	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	
Buy and consume more low Kilojoule foods than average (self)	0,651	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	
Try and limit Kilojoule intake	0,584	0,000	0,000	0,474	0,000	0,000	0,000	0,000	0,000	0,000	
Frequently cook and love to do so	0,000	0,806	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	
Enjoy preparing food for family	0,000	0,779	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	
Cook the best way even if it takes longer	0,000	0,627	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	
Prefer meals that can be prepared quickly	0,000	-0,587	0,000	0,000	0,000	0,000	0,000	0,000	-0,267	0,000	
Eat quickly prepared meals at home	0,000	-0,546	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	
Aware of cost of ingredients and of food	0,000	0,000	0,764	0,000	0,000	0,000	0,000	0,000	0,000	0,000	
Economy minded with regards to cooking	0,000	0,000	0,753	0,000	0,000	0,000	0,000	0,000	0,000	0,000	
Primary concern in food selection is value for money	0,000	0,000	0,711	0,000	0,000	0,000	0,000	0,000	0,000	0,000	
Use a budget for shopping and food planning	0,000	0,000	0,697	0,000	0,000	0,000	0,000	0,000	0,000	0,000	
Cut back family red meat consumption	0,000	0,000	0,000	0,634	0,000	0,000	0,000	0,000	0,000	0,000	
Avoid foods high in animal fats and cholesterol	0,311	0,000	0,000	0,599	0,000	0,000	0,000	0,000	-0,260	0,000	
Responsible for family health by using nutritional foods	0,000	0,000	0,000	0,564	0,000	0,000	0,000	0,000	0,000	0,395	
Aware of need to limit family cholesterol	0,288	0,000	0,000	0,551	0,000	0,312	0,000	0,000	0,000	0,000	
Need to include fresh/raw products in family meal	0,000	0,000	0,000	0,532	0,000	0,000	0,000	0,000	0,398	0,333	
Avoid foods containing colourants/artificial	0,000	0,000	0,000	0,000	0,792	0,000	0,000	0,000	0,000	0,000	
Check labels for artificial ingredients	0,305	0,500	0,000	0,000	0,715	0,000	0,000	0,000	0,000	0,000	
Aware of artificial ingredients in processed food	0,000	0,000	0,000	0,295	0,686	0,000	0,000	0,000	0,000	0,000	
Main value in food is in nourishment vs taste	0,000	0,000	0,000	0,000	0,000	0,808	0,000	0,000	0,000	0,000	
More important to select food for nutrition than taste	0,000	0,000	0,000	0,000	0,000	0,755	0,000	0,000	0,000	0,000	
Like to prepare ethnic dishes	0,000	0,000	0,000	0,000	0,000	0,000	0,784	0,000	0,000	0,000	
Enjoy preparing gourmet/exotic dishes	0,000	0,000	0,000	0,000	0,000	0,000	0,743	0,000	0,000	0,000	
Reliant on convenient foods	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,837	0,000	0,000	
Frequently use convenient foods	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,782	0,000	0,000	
Use herbs and seasoning	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,719	0,000	
Use microwave to save time	0,000	-0,399	0,000	0,000	0,000	0,000	0,000	0,000	0,515	0,000	
Like to prepare meals from basic ingredients	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,785	
Like to use wholesome ingredients	0,303	0,000	0,000	0,000	0,380	0,000	0,000	0,000	0,000	0,395	
Primarily concerned with providing nutrition	0,308	0,000	0,000	0,304	0,000	0,000	0,000	0,000	0,000	0,000	
Choice between taste and nutrition, put nutrition first	0,331	0,000	0,000	0,000	0,000	0,413	0,000	0,000	0,000	0,000	
Enjoy cooking with wine	0,000	0,000	0,000	0,000	0,000	0,000	0,480	0,000	0,296	0,000	
VP (Eigen Value)	3,215	2,659	2,461	2,349	2,116	1,767	1,592	1,547	1,333	1,255	20,294
% Explained Variation	15,8	13,1	12,1	11,6	10,4	8,7	7,8	7,6	6,6	6,3	100%
Cumulative % Explained Variation	15,8	28,9	41,0	52,6	63,0	71,7	79,5	87,1	93,7	100%	

* Note: The above factor loading matrix has been re-arranged so that the columns appear in decreasing order of variance explained by factors. The rows have been re-arranged so that for each successive factor, loadings greater than 0.5000 appear first. Loadings less than 0.2500 have been replaced by zero.

Referring to Table 29, there were 10 eigenvalues greater than 1. The first 4 factors accounted for 52,6% of the total variation.

In order to name the factors, those variables with the largest loading (>0,5%) on each score were examined. The factors were named as follows:

FACTOR 1 WEIGHT WATCHERS
FACTOR 2 LOVE FAMILY COOKING
FACTOR 3 BUDGETER
FACTOR 4 HEALTHY LIFESTYLE
FACTOR 5 PRO NATURAL
FACTOR 6 NUTRITION PRONE
FACTOR 7 CONNOISSEUR
FACTOR 8 TIME SAVER
FACTOR 9 MODERN PREPARATION
FACTOR 10 TRADITIONAL PREPARATION

These 10 factors reflect the respondents value orientations towards home cooking, her enduring motivations and attitudes towards home food selection and preparation.

FACTOR 1 WEIGHT WATCHERS

This first factor is clearly concerned with calorie content of food whether for the family or for herself.

FACTOR 2 LOVE FOR FAMILY COOKING

The second factor concerns the enjoyment respondents express for preparing and cooking the family meal . Strong negative correlations are recorded with 'quickly prepared meals'. The respondents motivation is to therefore carefully and lovingly prepare meals for the family.

FACTOR 3 BUDGETER

Factor 3 is clearly a 'cost' factor and shows the respondents concerns for budgeting when planning meals. Cost of ingredients and value for money offered by different products are perceived as important considerations.

FACTOR 4 HEALTHY LIFESTYLE

This factor reflects the consumers attitude towards healthy living, cutting back on foods high in cholesterol and animal fats and including fresh products in a balanced diet.

FACTOR 5 AVOIDS ARTIFICIAL INGREDIENTS

Factor 5 concerns the respondents feelings towards harmful chemical ingredients in foodstuff.

FACTOR 6 NUTRITION PRONE

This factor reflects the high priority placed on the importance of providing nutrition in the family meal.

FACTOR 7 CONNOISSEUR

This factor clearly reflects the more exotic approaches to cooking - such as preparing ethnic/gourmet meals/cooking with wine.

FACTOR 8 TIME SAVER

This factor concerns the time factor with respect to cooking and the respondents related attitude to the use of convenience foods.

FACTOR 9 MODERN PREPARATION

This factor links the ingredients and method used in home cooking. Herbs and spices and use of a microwave indicate a more modern approach to healthy preparation and cooking styles.

FACTOR 10 WHOLESOME PREPARATION

This factor links together the more traditional wholesome approach to food preparation and cooking style - preparing meals from basic ingredients, using wholesome ingredients etc.

In summary, one may conclude from the above analysis that there are 10 underlying value orientations expressed by respondents towards home cooking. There appears to be a strong motivation, enjoyment and sense of responsibility felt for home cooking resulting in specific attitudes towards nutrition, health, artificial ingredients and calorie content. Both time and cost constraints are also considered by the respondents and are weighed up against these motivations, as obviously there is some tradeoff to be made.

The factor analysis also validates the authors hypothesized '6' value orientations , but also provides additional insights. Specifically factors 2,4,6 and 7 pertain directly to the authors first two orientations (enjoyment and responsibility for home cooking). The factor analysis highlighted the importance placed on nutrition in family meal planning (factor 6) while factor 7 revealed value orientations pertaining to the more exotic approaches to cooking. Factor 3, 'budgeter' relates to the author's 3rd orientation investigating cost. Factor 1 and 5 relates respectively to the fourth and fifth orientations investigated by the author - concerned with calorie content and with artificial ingredients. The sixth orientation investigated by the author related to food preparation. This relates directly to Factors 8, 9 and 10, wherein different orientations with respect to time and modern versus traditional preparation styles were highlighted.

4.6 Role Perceptions (Question 19, Refer Appendix B)

The 30 statements included in Question 19 attempted to measure the respondents roles they perceived themselves as playing with specific respect to home cooking. More specifically these statements refer to the manner in which the respondent as an individual goes about planning, preparing and cooking food in order to give

positive expression or reflect the type of person she is or perceives herself to be. Respondents were asked to indicate their level of agreement or disagreement for 30 statements. The results are detailed in Table 30.

Table 30 Role Perceptions with respect to Home Cooking

ROLE PERCEPTION STATEMENTS	Base = 402			
	% Agree	% Neural	% Dis-agree	TOTAL
Cooking is an important part of life	63%	3%	34%	100%
Life is centred around the kitchen	28%	3%	69%	100%
Most of free time at home cooking	29%	3%	68%	100%
Major hobby is cooking	39%	4%	57%	100%
Don't like everyday cooking	53%	3%	44%	100%
Don't like going shopping	51%	3%	46%	100%
Spend as little time as possible in the kitchen	36%	4%	60%	100%
Like maid to do cooking	20%	2%	78%	100%
Eat out to save cooking time	22%	2%	76%	100%
Read recipe books	76%	3%	21%	100%
Select and read magazines for recipe ideas	50%	3%	47%	100%
New recipe ideas from magazines	60%	2%	38%	100%
Select simple recipes from magazines only	52%	4%	44%	100%
Magazine recipes too complicated	39%	3%	58%	100%
Free recipe book offer	35%	3%	62%	100%
Enjoy inviting friends for meals	92%	1%	7%	100%
Enjoy planning and preparing meals when entertaining	81%	2%	17%	100%
Frequently entertain	56%	3%	41%	100%
Cooking is creative	70%	3%	27%	100%
Choose recipes that allow one to be creative	67%	5%	28%	100%
Experiment with new recipe ideas	68%	2%	30%	100%
Opinion leader - cookery	39%	5%	56%	100%
Influences friends and family - cooking	60%	2%	38%	100%
Give advice on cooking	53%	5%	42%	100%
Spend time talking about cooking\recipes	30%	4%	66%	100%
Seek advice from others on cooking	57%	5%	38%	100%
Get advice from family/friends on cooking	61%	4%	35%	100%
Winning family praise for cooking - important	72%	3%	25%	100%
Feels disappointed when dinner flops	72%	4%	24%	100%
Judged by food prepared	44%	3%	53%	100%

Analysis of the data in Table 30 revealed a variety of different roles 'played' by respondents with respect to everyday cooking. The author hypothesized that these related to three basic role perceptions as follows:

1. Routine Home Cooking

   Home cooking plays an important role in at least 63% of all respondents lives; 28% in fact stated that their life was CENTRED around the kitchen', 29% spent MOST of their FREE TIME at home cooking and 39% stated that their MAJOR HOBBY was cooking.These respondents, therefore, perceived their role very much as centred around the home and kitchen to satisfy family needs.

   Just as there are those respondents who spend much of their 'lives in the kitchen' there are those who don't like everyday cooking and shopping (53% and 51% respectively). Specifically 36% spend as little time as possible in the kitchen, while 20% and 22% respectively would like a maid to do the cooking and would like to eat out just to save on cooking time. These respondents, therefore do not perceive themselves as playing an important role in cooking for themselves or their family, but rather, perceive themselves as having other more important roles to play outside that of cooking.

2. Special Occasion and Creative Cooking

   When preparing meals for entertaining, respondents indicated a high level of enjoyment. Specifically 92% enjoyed inviting family and friends for meals and 81% enjoyed planning and preparing the meals. It must be noted that while they enjoyed entertaining, only 56% frequently did so. In the authors opinion this is most probably due to cost and the more busy/independent lifestyles of families today. It is likely that certain respondents, therefore perceived themselves as playing different roles with respect to cooking depending on whether it was everyday cooking or entertainment cooking.

   Just as respondents enjoyed 'special occasion' cooking, 78% perceive

cooking to be creative. In addition more than two thirds of the sample experiment with new recipes and chose recipes that allowed them to express their distinct personalities.

Cooking, therefore, allows certain respondents to play a creative role.

3. Opinion Leadership/Interpersonal Communication and Media Habits

Since cooking plays such an important role in many of the respondents lives, it was not surprising that 39% perceived themselves as opinion leaders with respect to home cooking. Specifically 61% perceived themselves influencing family and friends with respect to cooking and 53% regularly gave advice on cooking. In the authors opinion 'cooking' is obviously an activity that attracts much discussion on behalf of many of the respondents because of the emphasis they place on it and because of the amount of time it takes up of their everyday lives. This is borne out by the following two findings:

1) 30% spend 'a lot of' time talking about cooking and 57% and 67% respectively sought advice of family and friends for cooking.

2) 72% felt winning family praise for their cooking was important and felt personally disappointed if their dinner flopped, while 44% actually judged themselves by the food they prepared.

Reinforcing the above findings were respondents media habits with respect to home cooking.

76% of respondents simply enjoyed reading their recipe books while 50% actually selected and read magazines for recipe ideas. 60% sourced new recipes from magazines and experimented with these; however 39% felt magazine recipes were too complicated and only 35% would write in for a free recipe offer.

Once again in order to simplify the data, to establish if there are any relationship among the 30 statements and to validate the authors' hypothesized constructs, a factor analysis was performed. The results are presented in Table 31.

Table 31 Sorted Rotated Factor Loadings Matrix* - Role Perceptions

ROLE PERCEPTION STATEMENTS - HOME COOKING.	FACTOR 1	FACTOR 2	FACTOR 3	FACTOR 4	FACTOR 5	FACTOR 6	FACTOR 7	FACTOR 8	TOTAL
Cooking is an important part of life	0,625	0,000	0,000	0,000	0,000	0,000	0,000	0,000	
Spend a lot of time talking about cooking	0,613	0,000	0,000	0,327	0,000	0,000	0,000	0,000	
Opinion leader with respect to cooking	0,605	0,000	0,318	0,000	0,000	-0,320	0,000	0,000	
Life centred around kitchen	0,602	-0,357	0,000	0,000	0,304	0,000	0,000	0,000	
Give advice on cooking	0,569	0,000	0,290	0,342	0,000	0,000	0,000	0,000	
Like maid to do cooking	0,000	0,651	0,000	0,000	0,000	0,000	0,000	0,000	
Don't like everyday cooking	-0,386	0,632	0,000	0,000	0,000	0,000	0,000	0,000	
Don't like grocery shopping	0,000	0,621	0,000	-0,379	-0,262	0,000	0,000	0,000	
Spend as little time as possible in kitchen	0,000	0,601	0,000	0,000	0,000	0,000	0,000	0,000	
Eat out to save cooking time	0,000	0,574	0,000	0,000	0,252	0,000	0,000	0,307	
Cooking is creative	0,000	0,000	0,719	0,000	0,000	0,000	0,000	0,000	
Choose recipes that allow one to express individuality	0,000	0,000	0,596	0,000	0,301	0,000	0,278	0,000	
Select simple recipes from magazines	0,000	0,000	-0,527	0,000	0,000	0,272	0,000	0,000	
Influence others with respect to cooking	0,345	0,000	0,502	0,000	0,000	0,388	0,000	0,000	
Select and read magazines for recipes	0,000	0,000	0,000	0,709	0,000	0,000	0,000	0,251	
Use free recipe offers	0,000	0,000	0,000	0,593	0,000	0,000	0,000	0,000	
Read recipe books	0,000	0,000	0,000	0,566	0,000	0,000	0,000	0,000	
Judged by food prepared	0,000	0,000	0,000	0,000	0,769	0,000	0,000	0,000	
Feel disappointed when dinner is a flop	0,000	0,000	0,000	0,000	0,578	0,326	0,000	0,000	
Winning family praise for cooking is important	0,000	0,000	0,000	0,367	0,543	0,000	0,000	0,000	
Seek advice of others - cooking	0,000	0,000	0,000	0,000	0,000	0,777	0,000	0,000	
Seek advice from family - cooking	0,000	0,000	0,000	0,000	0,000	0,770	0,000	0,000	
Enjoy inviting friends for meals	0,000	0,000	0,000	0,000	0,000	0,000	0,805	0,000	
Frequently entertain	0,000	0,000	0,000	0,261	0,000	0,000	0,599	0,000	
Enjoy planning and preparing meals for entertaining	0,000	0,000	0,484	0,000	0,000	0,000	0,537	0,000	
Most magazine recipes too complicated	0,000	0,266	0,000	0,000	0,000	0,000	0,000	-0,683	
New recipe ideas from magazines	0,000	0,000	0,000	0,278	0,000	0,000	0,000	0,682	
Often experiment with new recipe ideas	0,000	0,000	0,495	0,373	0,000	0,000	0,269	0,000	
Spend most of free time cooking	0,409	-0,278	0,000	0,000	0,449	0,000	0,000	0,000	
Major hobby is cooking	0,455	-0,377	0,000	0,285	0,399	0,000	0,000	0,000	
VP/Eigen Value	2,893	2,714	2,422	2,278	2,062	1,869	1,742	1,265	17,245
% Explained Variation	16,8%	15,7%	14,1%	13,2%	12,0%	10,8%	10,1%	7,3%	100%
Cumulative % Explained Variation	16,8%	32,5%	46,6%	59,8%	71,8%	82,6%	92,7%	100%	

* The above factor loading matrix has been rearranged so that the columns appear in decreasing order of variance explained by factors. The rows have been rearranged so that for each successive factor, loadings greater than 0.5000 appear first. Loadings less than 0.2500 have been replaced by zero.

Referring to Table 31 it can be seen that there are 8 eigen-values greater than 1. The 8 factors accounted for 100% of the variance in the data and the first 4 factors accounted for 60% of the TOTAL variance.

In order to name the factors, those variables with the largest loading (>0,5) on each score were examined. The factors appeared to be as follows:

FACTOR 1 HOME PROVIDER
FACTOR 2 HOME AVOIDER
FACTOR 3 EXPERIMENTER
FACTOR 4 MEDIA ADDICT
FACTOR 5 ACHIEVEMENT SEEKER
FACTOR 6 OPINION FOLLOWER
FACTOR 7 SOCIAL ENTERTAINER
FACTOR 8 INNOVATOR

The factor analysis reveals that there are 8 different roles that the respondents perceived themselves as portraying with respect to home cooking.

FACTOR 1 - Home Provider

This factor clearly reflects those respondents whose focus of attention is on the kitchen and the home. A primary role portrayed is therefore cooking for the family. This role is a central part of their life. A lot of time is spent in the kitchen and therefore a certain amount of confidence and enjoyment with respect to cooking is also evident.

FACTOR 2 - Home Avoider -

This factor emphasizes avoidance of the kitchen. These respondents perceive their role as being outside of the 'kitchen'. They do not place importance on their role or do not perceive their role as one of everyday cooking for the family.

FACTOR 3 - Creative Experimenter

Factor 3 is concerned with creativity in cooking. It reflects those

respondents who feel that cooking allows them to play a creative role. Respondents enjoy preparing new/novel recipes, enjoy finding new and interesting ways to serve food. They are confident to try 'the not so simple' and see themselves influencing others due to this 'confidence'

FACTOR 4 - Media Opinion Leader

Factor 4 embodies the media aspect of home cooking. Those respondents who actually set out to read magazines or their recipe books for recipe ideas for home cooking. They perceive their role as opinion leaders with respect to media related to food preparation.

FACTOR 5 - Achievement Seeker

Factor 5 closely reflects the role of the more conservative respondents who measure their success on the basis of recognition obtained from others for their skill in cooking activities.

FACTOR 6 - Opinion Follower

The variables loaded on the factor are concerned with 'following the advice /seeking advice from others)' - the respondents therefore perceive themselves to be 'followers' with respect to home cooking.

FACTOR 7 - Social Entertainer

This factor reflects the role the respondents perceive for themselves as regards to social occasions and entertaining. Family and friends are frequently entertained and a high level of enjoyment in planning and preparing the meals for these occasions is closely correlated. She perceives her role as social entertainer with respect to food preparation.

FACTOR 8 - Innovator

In this case the role perceived is that of 'experimenter' -respondents actively select new recipes from magazines to try new and complicated dishes.

In summary there are 8 roles that respondents perceived themselves as playing with respect to home cooking. There were those that perceived their role as home providers expressing a love for family cooking versus the home avoiders who would like to spend as little time as possible in the kitchen; the media opinion leaders - avid consumers of literature related to food/recipes; the experimenters - concerned with creativity in cooking; the achievement seekers - judging their success by others opinions and therefore a more 'subservient role'; opinion followers - taking advice from others; social entertainers - who frequently entertain and love to do so; innovators who perceive their role as innovative with respect to home cooking - frequently testing new recipes.

The factor analysis again helped validate the author's hypothesized three 'constructs' with respect to role perceptions for home cooking.

Specifically factors 1 & 2 relate to the author's first construct - 'routine' home cooking. Factors 3-7 relate to the 'special occasion and creative cooking roles discussed by the author in the 2nd construct. Finally, factors 4,5,6 and 8 all relate to the 3rd construct which investigated roles portrayed with regard to media and other interpersonal communications.

APPENDIX D

BMDP 7 M STEPWISE DISCRIMINANT ANALYSIS RUNSTREAM FOR NON-PSYCHOGRAPHIC VARIABLES ONLY

```
BMDP7M - STEPWISE DISCRIMINANT ANALYSIS
Copyright 1977, 1979, 1981, 1982, 1983, 1985, 1987, 1988, 1990
              by BMDP Statistical Software, Inc.

      BMDP Statistical Software, Inc.| BMDP Statistical Software
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      Los Angeles, CA 90025 USA      | Cork, Ireland
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         Telex 4972934 BMDP UI       |    Telex 75659 SSWL EI

Version: 1990    (VAX/VMS)          DATE:     5-FEB-92       AT 11:18:40
 Manual: BMDP Manual Vol. 1 and Vol. 2.
 Digest: BMDP User's Digest.
Updates: State NEWS. in the PRINT paragraph for summary of new features.

PROGRAM INSTRUCTIONS

/ input   file='score.all'.
          code=scoreall.

/variable use=

             usage,

             lang,  numbhh
                    children,
             reg1,reg2,
serstew,   sersauce,   serveg,   sersalad,   serbreak,
oftbrek,oftlun,oftdin,oftd,ofts,oftw,
pursup,
agea,age2,age3,age4,
y1,y2,y3,y4,y5,y6,y7,
wfull,wpart,whome,wune,
hsin,   hsinb,   hmarn,   hwid,   hmarco,   hwidco,   hmarc.
grouping=usage.
/group codes(usage)=1,2,3.
       names(usage)=heavy,light   ,light.
/transform if (region eq 1)
             then (reg1=1, reg2=0.).
          if (region eq 2)
             then (reg1=0, reg2=1.).
          if (region eq 3)
             then (reg1=0, reg2=0.).

          if (mserve eq 3)
 then (serstew=1, sersauce=0. serveg=0. sersalad=0. serbreak=0.).
          if (mserve eq 4)
 then (serstew=0. sersauce=1. serveg=0. sersalad=0. serbreak=0.).
          if (mserve eq 5)
 then (serstew=0. sersauce=0. serveg=1. sersalad=0. serbreak=0.).
          if (mserve eq 6)
 then (serstew=0. sersauce=0. serveg=0. sersalad=1. serbreak=0.).
          if (mserve eq 8)
 then (serstew=0. sersauce=0. serveg=0. sersalad=0. serbreak=1.).
          if (mserve eq 1 or mserve eq 2 or mserve eq 7 or mserve ge 9)
 then (serstew=0. sersauce=0. serveg=0. sersalad=0. serbreak=0.).

          if (mealoft eq 1)
then (oftbrek=1. oftlun=0. oftdin=0.).
          if (mealoft eq 2)
then (oftbrek=0. oftlun=1. oftdin=0.).
          if (mealoft eq 3)
then (oftbrek=0. oftlun=0. oftdin=1.).
          if (mealoft ge 4 )
then (oftbrek=0. oftlun=0. oftdin=0.).

          if (purchase eq 1 ) then (pursup=1.).
          if (purchase ge 2 ) then (pursup=0.).

          if (firstb eq 1 )
then (benease=1. benhealt=0. bentaste=0. benextra=0. benver=0. ).
          if (firstb eq 3 )
then (benease=0. benhealt=1. bentaste=0. benextra=0. benver=0. ).
          if (firstb eq 4 )
then (benease=0. benhealt=0. bentaste=1. benextra=0. benver=0. ).
          if (firstb eq 6 )
then (benease=0. benhealt=0. bentaste=0. benextra=1. benver=0. ).
          if (firstb eq 8 )
then (benease=0. benhealt=0. bentaste=0. benextra=0. benver=1. ).
          if (firstb eq 2 or firstb eq 5 or firstb eq 7 or firstb ge 9 )
then (benease=0. benhealt=0. bentaste=0. benextra=0. benver=0. ).

          if (firsta eq 1 )
then (abrand=1. aprice=0. aqual=0. afresh=0. ).
          if (firsta eq 2 )
then (abrand=0. aprice=1. aqual=0. afresh=0. ).
          if (firsta eq 3 )
then (abrand=0. aprice=0. aqual=1. afresh=0. ).
          if (firsta eq 4 )
then (abrand=0. aprice=0. aqual=0. afresh=1. ).
          if (firsta ge 5 )
then (abrand=0. aprice=0. aqual=0. afresh=0. ).

          if (age eq 1 )
then (agea=1. age2=0. age3=0. age4=0. ).
          if (age eq 2 )
then (agea=0. age2=1. age3=0. age4=0. ).
          if (age eq 3 )
then (agea=0. age2=0. age3=1. age4=0. ).
          if (age eq 4 )
then (agea=0. age2=0. age3=0. age4=1. ).
          if (age eq 5 )
then (agea=0. age2=0. age3=0. age4=0. ).

          if (income eq 1 )
then (y1=1. y2=0. y3=0. y4=0. y5=0. y6=0. y7=0.).
          if (income eq 2 )
then (y1=0. y2=1. y3=0. y4=0. y5=0. y6=0. y7=0.).
          if (income eq 3 )
then (y1=0. y2=0. y3=1. y4=0. y5=0. y6=0. y7=0.).
          if (income eq 4 )
then (y1=0. y2=0. y3=0. y4=1. y5=0. y6=0. y7=0.).
          if (income eq 5 )
then (y1=0. y2=0. y3=0. y4=0. y5=1. y6=0. y7=0.).
!PAGE   3  7M

          if (income eq 6 )
then (y1=0. y2=0. y3=0. y4=0. y5=0. y6=1. y7=0.).
          if (income eq 7 )
then (y1=0. y2=0. y3=0. y4=0. y5=0. y6=0. y7=1.).
          if (income eq 8 )
then (y1=0. y2=0. y3=0. y4=0. y5=0. y6=0. y7=0.).

          if (work eq 1 )
then (wfull=1. wpart=0. whome=0. wune=0. ).
          if (work eq 2 )
```

```
then (wfull=0, wpart=1. whome=0. wune=0. ) .
            if (work eq 3 )
then (wfull=0, wpart=0. whome=1. wune=0. )  .
            if (work eq 4 )
then (wfull=0, wpart=0. whome=0. wune=1. )   .
            if (work eq 5 )
then (wfull=0. wpart=0. whome=0. wune=0. )    .

          if (househol eq 1 )
then (hsin=1, hsinb=0. hmarn=0, hwid=0. hmarco=0. hwidco=0. hmarc=0. ).
          if (househol eq 2 )
then (hsin=0, hsinb=1. hmarn=0, hwid=0. hmarco=0. hwidco=0. hmarc=0. ).
          if (househol eq 3 )
then (hsin=0, hsinb=0. hmarn=1, hwid=0. hmarco=0. hwidco=0. hmarc=0. ).
          if (househol eq 4 )
then (hsin=0, hsinb=0. hmarn=0, hwid=1. hmarco=0. hwidco=0. hmarc=0. ).
          if (househol eq 5 )
then (hsin=0, hsinb=0. hmarn=0, hwid=0. hmarco=1. hwidco=0. hmarc=0. ).
          if (househol eq 6 )
then (hsin=0, hsinb=0. hmarn=0, hwid=0. hmarco=0. hwidco=1. hmarc=0. ).
          if (househol eq 7 )
then (hsin=0, hsinb=0. hmarn=0, hwid=0. hmarco=0. hwidco=0. hmarc=1. ).
          if (househol eq 8 )
then (hsin=0, hsinb=0, hmarn=0. hwid=0. hmarco=0. hwidco=0. hmarc=0. ).
          if (mostoft eq 6 )
then (oftd=1. ofts=0. oftw=0.).
           if (mostoft eq 2 )
then (oftd=0. ofts=1. oftw=0.).
            if (mostoft eq 10)
then (oftd=0. ofts=0. oftw=1.).
             if (mostoft eq 1 or mostoft eq 3 or mostoft eq 4 or
                 mostoft eq 5 or mostoft eq 7 or mostoft eq 8 or
                 mostoft eq 9 or mostoft eq 11 )
then (oftd=0. ofts=0. oftw=0.).
/end
```

STEP NUMBER 0

VARIABLE	F TO REMOVE	FORCE LEVEL	TOLERNCE
DF =	1 401		

	VARIABLE	F TO ENTER	FORCE LEVEL	TOLERNCE
	DF =	1 400		
245	lang	1.94	1	1.00000
250	numbhh	0.29	1	1.00000
249	children	0.04	1	1.00000
276	reg1	0.86	1	1.00000
277	reg2	1.08	1	1.00000
278	serstew	3.93	1	1.00000
279	sersauce	0.43	1	1.00000
280	serveg	12.85	1	1.00000
281	sersalad	0.03	1	1.00000
282	serbreak	0.03	1	1.00000
283	oftbrek	0.35	1	1.00000
284	oftlun	0.53	1	1.00000
285	oftdin	7.09	1	1.00000
318	oftd	0.22	1	1.00000
319	ofts	3.65	1	1.00000
320	oftw	0.70	1	1.00000
286	pursup	2.66	1	1.00000
296	agea	4.47	1	1.00000
297	age2	1.03	1	1.00000
298	age3	1.03	1	1.00000
299	age4	0.45	1	1.00000
300	y1	0.16	1	1.00000
301	y2	0.59	1	1.00000
302	y3	0.00	1	1.00000
303	y4	3.28	1	1.00000
304	y5	0.98	1	1.00000
305	y6	0.10	1	1.00000
306	y7	0.20	1	1.00000
307	wfull	2.80	1	1.00000
308	wpart	0.33	1	1.00000
309	whome	1.83	1	1.00000
310	wune	1.20	1	1.00000
311	hsin	4.43	1	1.00000
312	hsinb	0.42	1	1.00000
313	hmarn	2.05	1	1.00000
314	hwid	0.89	1	1.00000
315	hmarco	6.31	1	1.00000
316	hwidco	0.00	1	1.00000
317	hmarc	2.97	1	1.00000

STEP NUMBER 5
VARIABLE ENTERED 286 pursup

VARIABLE	F TO REMOVE	FORCE LEVEL	TOLERNCE
DF =	1 396		
280 serveg	9.56	1	0.98585
285 oftdin	6.84	1	0.97123
286 pursup	7.65	1	0.99772
315 hmarco	14.17	1	0.79864
317 hmarc	7.26	1	0.80757

VARIABLE	F TO ENTER	FORCE LEVEL	TOLERNCE
DF =	1 395		
245 lang	1.16	1	0.98527
250 numbhh	0.16	1	0.97459
249 children	1.32	1	0.59176
276 reg1	0.01	1	0.95170
277 reg2	0.67	1	0.97747
278 serstew	2.58	1	0.92733
279 sersauce	0.08	1	0.96227
281 sersalad	0.20	1	0.93282
282 serbreak	1.37	1	0.88304
283 oftbrek	1.61	1	0.70238
284 oftlun	0.10	1	0.79869
318 oftd	0.02	1	0.98717
319 ofts	3.10	1	0.99671
320 oftw	1.02	1	0.98288
296 agea	0.37	1	0.86490
297 age2	0.80	1	0.94050
298 age3	1.55	1	0.85429
299 age4	0.11	1	0.82262
300 y1	0.37	1	0.89969
301 y2	0.84	1	0.96351
302 y3	0.03	1	0.92950
303 y4	1.48	1	0.87363
304 y5	0.30	1	0.93515
305 y6	0.02	1	0.98538
306 y7	0.06	1	0.98075
307 wfull	0.03	1	0.97300
308 wpart	0.00	1	0.85559
309 whome	0.03	1	0.64308
310 wune	2.05	1	0.88029
311 hsin	0.61	1	0.88539
312 hsinb	0.07	1	0.80625
313 hmarn	0.10	1	0.87758
314 hwid	0.00	1	0.79083
316 hwidco	1.63	1	0.89250

U-STATISTIC(WILKS' LAMBDA) 0.9074929 DEGREES OF FREEDOM 5 1 400
APPROXIMATE F-STATISTIC 8.073 DEGREES OF FREEDOM 5.00 396.00

APPENDIX E

BMDP 7M STEPWISE DISCRIMINANT ANALYSIS RUNSTREAM INCLUDING PSYCHOGRAPHIC VARIABLES

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BMDP7M - STEPWISE DISCRIMINANT ANALYSIS
Copyright 1977, 1979, 1981, 1982, 1983, 1985, 1987, 1988, 1990
              by BMDP Statistical Software, Inc.

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         Telex 4972934 BMDP UI         |    Telex 75659 SSWL EI

Version: 1990    (VAX/VMS)          DATE:     5-FEB-92       AT 11:41:30
 Manual: BMDP Manual Vol. 1 and Vol. 2.
 Digest: BMDP User's Digest.
Updates: State NEWS. in the PRINT paragraph for summary of new features.

PROGRAM INSTRUCTIONS

/ input   file='score,all'.
          code=scoreall.

/variable use=habit,qual,same,risk,litdif,
              impulse,lowprice,bulk,peers,new,special,weight,
              appear,list,fresh,usage,fsilver,fdenny,fwool
              qsilver,qdenny,qwool,esilver,edenny,ewool,csilver,cdenny,
              cwool,lsilver,ldenny,lwool,msilver,mdenny,mwool,psilver,
              pdenny,pwool,
              place to response,
              lang,  numbhh,oftd,ofts,oftw,
                     children,
              reg1,reg2,
serstew,   sersauce,   serveg,   sersalad,   serbreak,
oftbrek,oftlun,oftdin,
pursup,
benease,   benhealt,   bentaste,   benextra,   benver,
abrand,aprice,aqual,afresh,
agea,age2,age3,age4,
y1,y2,y3,y4,y5,y6,y7,
wfull,wpart,whome,wune,
hsin,   hsinb,   hmarn,   hwid,   hmarco,   hwidco,   hmarc.
grouping=usage.
/group codes(usage)=1,2,3.
       names(usage)=heavy,light   ,light.
/transform if (region eq 1)
              then (reg1=1, reg2=0.).
           if (region eq 2)
              then (reg1=0, reg2=1.).
           if (region eq 3)
              then (reg1=0, reg2=0.).

           if (mserve eq 3)
 then (serstew=1. sersauce=0. serveg=0. sersalad=0. serbreak=0.).
           if (mserve eq 4)
 then (serstew=0. sersauce=1. serveg=0. sersalad=0. serbreak=0.).
           if (mserve eq 5)
 then (serstew=0. sersauce=0. serveg=1. sersalad=0. serbreak=0.).
           if (mserve eq 6)
 then (serstew=0. sersauce=0. serveg=0. sersalad=1. serbreak=0.).

           if (mserve eq 8)
 then (serstew=0. sersauce=0. serveg=0. sersalad=0. serbreak=1.).
           if (mserve eq 1 or mserve eq 2 or mserve eq 7 or mserve ge 9)
 then (serstew=0. sersauce=0. serveg=0. sersalad=0. serbreak=0.).

           if (mealoft eq 1)
 then (oftbrek=1. oftlun=0, oftdin=0.).
           if (mealoft eq 2)
 then (oftbrek=0. oftlun=1, oftdin=0.).
           if (mealoft eq 3)
 then (oftbrek=0. oftlun=0, oftdin=1.).
           if (mealoft ge 4 )
 then (oftbrek=0. oftlun=0. oftdin=0.).

           if (purchase eq 1 ) then (pursup=1.).
           if (purchase ge 2 ) then (pursup=0.).

           if (firstb eq 1 )
 then (benease=1, benhealt=0, bentaste=0. benextra=0. benver=0. ).
           if (firstb eq 3 )
 then (benease=0, benhealt=1, bentaste=0. benextra=0. benver=0. ).
           if (firstb eq 4 )
 then (benease=0, benhealt=0, bentaste=1. benextra=0. benver=0. ).
           if (firstb eq 6 )
 then (benease=0, benhealt=0, bentaste=0. benextra=1. benver=0. ).
           if (firstb eq 8 )
 then (benease=0, benhealt=0. bentaste=0. benextra=0. benver=1. ).
           if (firstb eq 2 or firstb eq 5 or firstb eq 7 or firstb ge 9 )
 then (benease=0. benhealt=0. bentaste=0. benextra=0. benver=0. ).

           if (firsta eq 1 )
 then (abrand=1, aprice=0. aqual=0. afresh=0. ).
           if (firsta eq 2 )
 then (abrand=0, aprice=1. aqual=0. afresh=0. ).
           if (firsta eq 3 )
 then (abrand=0, aprice=0. aqual=1. afresh=0. ).
           if (firsta eq 4 )
 then (abrand=0, aprice=0. aqual=0. afresh=1. ).
           if (firsta ge 5 )
 then (abrand=0. aprice=0. aqual=0. afresh=0. ).

           if (age eq 1 )
 then (agea=1, age2=0. age3=0. age4=0. ).
           if (age eq 2 )
 then (agea=0, age2=1. age3=0. age4=0. ).
           if (age eq 3 )
 then (agea=0, age2=0. age3=1. age4=0. ).
           if (age eq 4 )
 then (agea=0, age2=0. age3=0. age4=1. ).
           if (age eq 5 )
 then (agea=0. age2=0. age3=0. age4=0. ).

           if (income eq 1 )
 then (y1=1. y2=0, y3=0. y4=0. y5=0. y6=0. y7=0.).
           if (income eq 2 )
 then (y1=0. y2=1. y3=0. y4=0. y5=0. y6=0. y7=0.).
           if (income eq 3 )
 then (y1=0. y2=0, y3=1. y4=0. y5=0. y6=0. y7=0.).
           if (income eq 4 )
 then (y1=0. y2=0. y3=0. y4=1. y5=0. y6=0. y7=0.).
           if (income eq 5 )
 then (y1=0. y2=0. y3=0. y4=0. y5=1. y6=0. y7=0.).
           if (income eq 6 )
 then (y1=0. y2=0. y3=0. y4=0. y5=0. y6=1. y7=0.).
           if (income eq 7 )
 then (y1=0. y2=0. y3=0. y4=0. y5=0. y6=0. y7=1.).
           if (income eq 8 )
```

```
then (y1=0. y2=0. y3=0. y4=0. y5=0. y6=0. y7=0.).

            if (work eq 1 )
then (wfull=1, wpart=0. whome=0. wune=0. ).
            if (work eq 2 )
then (wfull=0, wpart=1. whome=0. wune=0. ) .
            if (work eq 3 )
then (wfull=0, wpart=0. whome=1. wune=0. )  .
            if (work eq 4 )
then (wfull=0, wpart=0. whome=0. wune=1. )   .
            if (work eq 5 )
then (wfull=0. wpart=0. whome=0. wune=0. )    .

            if (househol eq 1 )
then (hsin=1, hsinb=0. hmarn=0. hwid=0. hmarco=0. hwidco=0. hmarc=0. ).
            if (househol eq 2 )
then (hsin=0, hsinb=1. hmarn=0. hwid=0. hmarco=0. hwidco=0. hmarc=0. ).
            if (househol eq 3 )
then (hsin=0, hsinb=0. hmarn=1. hwid=0. hmarco=0. hwidco=0. hmarc=0. ).
            if (househol eq 4 )
then (hsin=0, hsinb=0. hmarn=0. hwid=1. hmarco=0. hwidco=0. hmarc=0. ).
            if (househol eq 5 )
then (hsin=0, hsinb=0. hmarn=0. hwid=0. hmarco=1. hwidco=0. hmarc=0. ).
            if (househol eq 6 )
then (hsin=0, hsinb=0. hmarn=0. hwid=0. hmarco=0. hwidco=1. hmarc=0. ).
            if (househol eq 7 )
then (hsin=0, hsinb=0. hmarn=0. hwid=0. hmarco=0. hwidco=0. hmarc=1. ).
            if (househol eq 8 )
then (hsin=0, hsinb=0. hmarn=0. hwid=0. hmarco=0. hwidco=0. hmarc=0. ).
            if (mostoft eq 6 )
then (oftd=1, ofts=0. oftw=0. ).
            if (mostoft eq 2 )
then (oftd=0, ofts=1. oftw=0. ).
            if (mostoft eq 10 )
then (oftd=0, ofts=0. oftw=1.).
            if (mostoft eq 1 or mostoft eq 3 or mostoft eq 4 or mostoft
                eq 5 or mostoft eq 7 or mostoft eq 8 or mostoft eq 9
                or mostoft eq 11 )
then (oftd=0. ofts=0. oftw=0. ).

/end
```

STEP NUMBER 0

VARIABLE	F TO REMOVE	FORCE LEVEL	TOLERNCE
DF = 1 401			

	VARIABLE	F TO ENTER	FORCE LEVEL	TOLERNCE
	DF = 1 400			
61	habit	1.04	1	1.00000
62	qual	8.13	1	1.00000
63	same	0.64	1	1.00000
64	risk	0.42	1	1.00000
65	litdif	1.05	1	1.00000
66	impulse	0.53	1	1.00000
67	lowprice	4.51	1	1.00000
68	bulk	0.14	1	1.00000
69	peers	0.90	1	1.00000
70	new	12.39	1	1.00000
71	special	0.54	1	1.00000
72	weight	0.06	1	1.00000
73	appear	2.73	1	1.00000
74	list	57.06	1	1.00000
75	fresh	3.23	1	1.00000
86	fsilver	0.03	1	1.00000
88	fdenny	0.12	1	1.00000
90	fwool	1.06	1	1.00000
97	qsilver	0.03	1	1.00000
99	qdenny	0.15	1	1.00000
101	qwool	0.05	1	1.00000
108	esilver	4.02	1	1.00000
110	edenny	1.05	1	1.00000
112	ewool	0.98	1	1.00000
119	csilver	0.00	1	1.00000
121	cdenny	0.60	1	1.00000
123	cwool	2.62	1	1.00000
130	lsilver	0.05	1	1.00000
132	ldenny	0.82	1	1.00000
134	lwool	0.16	1	1.00000
141	msilver	0.00	1	1.00000
143	mdenny	0.24	1	1.00000
145	mwool	1.20	1	1.00000
152	psilver	0.70	1	1.00000
154	pdenny	0.57	1	1.00000
156	pwool	0.60	1	1.00000
158	place	4.03	1	1.00000
160	flavour	4.33	1	1.00000
161	everyday	28.50	1	1.00000
162	poison	3.64	1	1.00000
163	differ	1.18	1	1.00000
164	luxury	48.87	1	1.00000
165	vits	20.01	1	1.00000
166	expense	23.62	1	1.00000
167	slim	0.35	1	1.00000
168	conven	0.75	1	1.00000
169	notfam	0.04	1	1.00000
170	dontlast	2.97	1	1.00000
171	occasion	24.17	1	1.00000
172	blends	0.46	1	1.00000
173	cookaway	1.62	1	1.00000
174	nochol	0.02	1	1.00000
175	gofar	0.14	1	1.00000
176	fibre	2.32	1	1.00000
177	ill	2.20	1	1.00000
178	extraord	0.99	1	1.00000
179	invite	1.35	1	1.00000
180	hobby	0.25	1	1.00000
181	express	0.13	1	1.00000
182	read	0.11	1	1.00000
183	praise	0.38	1	1.00000
184	littime	0.02	1	1.00000
185	advice	2.36	1	1.00000
186	import	0.14	1	1.00000
187	talk	0.40	1	1.00000
188	offers	0.39	1	1.00000
189	experi	2.70	1	1.00000
190	eatout	0.76	1	1.00000
191	source	4.06	1	1.00000
192	judge	1.31	1	1.00000
193	mags	0.03	1	1.00000
194	timeshop	0.00	1	1.00000
195	seekadv	1.35	1	1.00000
196	creative	3.12	1	1.00000
197	simple	2.22	1	1.00000
198	timecook	2.28	1	1.00000
199	influen	0.69	1	1.00000
200	flop	1.97	1	1.00000
201	fregnt	1.58	1	1.00000
202	magrecp	0.00	1	1.00000
203	nolike	2.38	1	1.00000
204	centred	2.26	1	1.00000
205	enjoypl	5.67	1	1.00000
206	maid	0.73	1	1.00000
207	relat	0.47	1	1.00000
208	complic	0.65	1	1.00000
209	nutrit	0.25	1	1.00000
210	love	1.09	1	1.00000
211	chol	0.30	1	1.00000
212	budget	12.16	1	1.00000
213	exotic	1.97	1	1.00000
214	calor	1.24	1	1.00000
215	artifi	0.00	1	1.00000
216	speed	2.42	1	1.00000
217	wine	0.04	1	1.00000
218	economy	1.60	1	1.00000
219	prinut	0.26	1	1.00000
220	basic	0.41	1	1.00000
221	limitcal	1.19	1	1.00000
222	check	0.87	1	1.00000
223	micro	2.52	1	1.00000
224	nourish	0.29	1	1.00000
225	cost	1.12	1	1.00000
226	nature	0.11	1	1.00000
227	redmeat	0.72	1	1.00000
228	ethnic	1.98	1	1.00000
229	kiloj	0.07	1	1.00000
230	rte	1.10	1	1.00000
231	mins	0.09	1	1.00000
232	longer	0.55	1	1.00000
233	yelmon	3.21	1	1.00000
234	limchol	1.22	1	1.00000
235	herbs	0.18	1	1.00000
236	chem	0.22	1	1.00000
237	selfcal	1.07	1	1.00000
238	raw	0.84	1	1.00000
239	needrte	0.03	1	1.00000
240	enjoypre	0.38	1	1.00000
241	person	1.20	1	1.00000
242	eatquick	0.02	1	1.00000
243	response	0.46	1	1.00000
245	lang	1.94	1	1.00000

*	250	numbhh	0.29	1	1.00000
*	318	oftd	0.52	1	1.00000
*	319	ofts	3.65	1	1.00000
*	320	oftw	0.70	1	1.00000
*	249	children	0.04	1	1.00000
*	276	reg1	0.86	1	1.00000
*	277	reg2	1.98	1	1.00000
*	278	serstew	3.93	1	1.00000
*	279	sersauce	0.42	1	1.00000
*	280	serveg	12.85	1	1.00000
*	281	sersalad	0.03	1	1.00000
*	282	serbreak	0.03	1	1.00000
*	283	oftbrek	0.22	1	1.00000
*	284	oftlun	0.55	1	1.00000
*	285	oftdin	7.06	1	1.00000
*	286	pursup	5.68	1	1.00000
*	287	benease	1.05	1	1.00000
*	288	benhealt	2.62	1	1.00000
*	289	bentaste	6.90	1	1.00000
*	290	benextra	4.80	1	1.00000
*	291	benver	3.97	1	1.00000
*	292	abrand	3.50	1	1.00000
*	293	aprice	0.06	1	1.00000
*	294	aqual	0.00	1	1.00000
*	295	afresh	0.84	1	1.00000
*	296	age1	4.47	1	1.00000
*	297	age2	1.93	1	1.00000
*	298	age3	3.02	1	1.00000
*	299	age4	0.35	1	1.00000
*	300	y1	0.16	1	1.00000
*	301	y2	0.56	1	1.00000
*	302	y3	0.00	1	1.00000
*	303	y4	3.28	1	1.00000
*	304	y5	0.19	1	1.00000
*	305	y6	0.10	1	1.00000
*	306	y7	0.20	1	1.00000
*	307	wfull	2.60	1	1.00000
*	308	wpart	0.33	1	1.00000
*	309	whome	1.93	1	1.00000
*	310	wune	1.79	1	1.00000
*	311	hsin	4.53	1	1.00000
*	312	hsinb	0.32	1	1.00000
*	313	hmarn	2.65	1	1.00000
*	314	hwid	0.48	1	1.00000
*	315	hmarco	6.31	1	1.00000
*	316	hwidco	0.00	1	1.00000
*	317	hmarc	2.97	1	1.00000

STEP NUMBER 14
VARIABLE ENTERED 287 benease

VARIABLE	F TO REMOVE	FORCE LEVEL	TOLERNCE
DF =	1 387		
74 list	32.00	1	0.89662
161 everyday	8.81	1	0.89378
164 luxury	20.38	1	0.94124
171 occasion	4.73	1	0.93166
176 fibre	6.83	1	0.94822
177 ill	8.21	1	0.95865
197 simple	5.40	1	0.91795
212 budget	5.00	1	0.89334
319 ofts	5.50	1	0.95347
280 serveg	7.84	1	0.97610
286 pursup	4.93	1	0.98375
287 benease	4.18	1	0.94903
315 hmarco	11.37	1	0.78397
317 hmarc	6.41	1	0.77415

VARIABLE	F TO ENTER	FORCE LEVEL	TOLERNCE
DF =	1 386		
61 habit	1.84	1	0.95280
62 qual	0.14	1	0.91574
63 same	1.68	1	0.92748
64 risk	0.23	1	0.93640
65 litdif	2.52	1	0.96407
66 impulse	0.03	1	0.97888
67 lowprice	0.06	1	0.91054
68 bulk	0.01	1	0.91596
69 peers	0.41	1	0.94253
70 new	2.96	1	0.95271
71 special	0.26	1	0.95348
72 weight	0.30	1	0.90738
73 appear	0.51	1	0.95076
75 fresh	0.21	1	0.98032
86 fsilver	0.08	1	0.92802
88 fdenny	0.06	1	0.89806
90 fwool	2.34	1	0.92592
97 qsilver	0.75	1	0.93859
99 qdenny	0.24	1	0.94172
101 qwool	0.03	1	0.94421
108 esilver	0.57	1	0.95521
110 edenny	0.06	1	0.97618
112 ewool	0.01	1	0.97595
116 csilver	0.10	1	0.96207
121 cdenny	0.07	1	0.94825
123 cwool	1.76	1	0.96946
130 lsilver	0.18	1	0.94673
132 ldenny	0.02	1	0.92760
134 lwool	0.34	1	0.94847
141 msilver	1.55	1	0.95005
143 mdenny	0.46	1	0.93080
145 mwool	2.16	1	0.92936
152 psilver	0.03	1	0.98509
154 pdenny	0.22	1	0.96303
156 pwool	0.12	1	0.94135
159 place	0.76	1	0.91979
160 flavour	0.12	1	0.94182
162 poison	0.42	1	0.89056
163 differ	0.17	1	0.92223
165 vits	2.05	1	0.90663
166 expense	0.21	1	0.77750
167 slim	0.02	1	0.94413
168 conven	0.11	1	0.93521
169 notfam	0.38	1	0.94997
170 dontlast	0.25	1	0.91541
172 blends	1.03	1	0.94564
173 cookaway	1.18	1	0.86677
174 nochol	0.56	1	0.95926
175 gofar	2.07	1	0.90537
178 extraord	0.70	1	0.95184
179 invite	0.00	1	0.94883
180 hobby	0.60	1	0.86230
181 express	0.50	1	0.90384
182 read	1.62	1	0.92467
183 praise	0.05	1	0.95410
184 littime	1.36	1	0.92845
185 advice	0.08	1	0.92219
186 import	1.27	1	0.90867
187 talk	1.81	1	0.92112
188 offers	0.01	1	0.94592
189 experi	0.29	1	0.88892
190 eatout	2.04	1	0.92736
191 source	0.59	1	0.95289
192 judge	1.15	1	0.93128
193 mags	0.46	1	0.94714
194 timeshop	0.80	1	0.91227
195 seekadv	0.03	1	0.93957
196 creative	0.50	1	0.88234
198 timecook	0.87	1	0.86079
199 influen	0.19	1	0.94074
200 flop	0.66	1	0.90785
201 freqnt	0.03	1	0.90355
202 magrecp	1.46	1	0.92882
203 nolike	1.76	1	0.94228
204 centred	0.02	1	0.84362
205 enjoypl	2.31	1	0.93761
206 maid	0.03	1	0.94485
207 relat	0.03	1	0.93137
208 complic	0.56	1	0.92355
209 nutrit	0.97	1	0.92581
210 love	0.01	1	0.86899
211 chol	1.39	1	0.96679
213 exotic	1.35	1	0.89842
214 calor	0.01	1	0.93050
215 artifi	0.38	1	0.94164
216 speed	0.21	1	0.89294
217 wine	0.12	1	0.97352
218 economy	0.15	1	0.75466
219 prinut	1.00	1	0.91917
220 basic	0.01	1	0.96684
221 limitcal	0.76	1	0.95884
222 check	0.37	1	0.93767
223 micro	2.65	1	0.94416
224 nourish	0.41	1	0.92323
225 cost	0.81	1	0.77696
226 nature	0.31	1	0.92858
227 redmeat	0.72	1	0.91607
228 ethnic	0.01	1	0.94617
229 kiloj	0.37	1	0.94487
230 rte	0.20	1	0.95631
231 mins	0.25	1	0.95383
232 longer	0.00	1	0.90397
233 valmon	0.89	1	0.84426
234 limchol	0.96	1	0.96509
235 herbs	0.07	1	0.96529
236 chem	0.23	1	0.97115
237 selfcal	0.70	1	0.95377
238 raw	0.59	1	0.97416
239 needrte	1.68	1	0.94841
240 enjoypre	0.18	1	0.87514
241 person	0.94	1	0.94960
242 eatquick	1.67	1	0.93935
243 response	0.16	1	0.90493
245 lang	0.19	1	0.94401
250 numbhh	2.07	1	0.56401
318 oftd	0.18	1	0.84917
320 oftw	0.54	1	0.95964
249 children	1.48	1	0.58006
276 reg1	0.80	1	0.93453
277 reg2	0.23	1	0.92268
278 serstew	1.09	1	0.91799

*	279	sersauce	0.32	1	0.94282
*	281	sersalad	0.22	1	0.88865
*	282	serbreak	0.04	1	0.95882
*	283	oftbrek	0.42	1	0.96225
*	284	oftlun	0.51	1	0.94323
*	285	oftdin	3.03	1	0.63772
*	288	benhealt	0.54	1	0.67716
*	289	bentaste	0.57	1	0.91662
*	290	benextra	1.40	1	0.87545
*	291	benver	0.48	1	0.88457
*	292	abrand	0.78	1	0.92766
*	293	aprice	1.03	1	0.96853
*	294	aqual	0.02	1	0.67852
*	295	afresh	0.40	1	0.93869
*	296	agea	1.70	1	0.93293
*	297	age2	0.33	1	0.85117
*	298	age3	3.19	1	0.91961
*	299	age4	1.52	1	0.84203
*	300	y1	0.56	1	0.83881
*	301	y2	0.10	1	0.92678
*	302	y3	0.32	1	0.91350
*	303	y4	1.34	1	0.84267
*	304	y5	1.75	1	0.91726
*	305	y6	0.19	1	0.97005
*	306	y7	0.08	1	0.96850
*	307	wfull	1.06	1	0.94205
*	308	wpart	0.76	1	0.83215
*	309	whome	0.23	1	0.93632
*	310	wune	1.22	1	0.85364
*	311	hsin	0.00	1	0.97463
*	312	hsinb	0.00	1	0.79822
*	313	hmarn	0.77	1	0.96270
*	314	hwid	1.37	1	0.67629
*	316	hwidco	0.57	1	0.82837

U-STATISTIC(WILKS' LAMBDA) 0.6573860 DEGREES OF FREEDOM 14 1 400
APPROXIMATE F-STATISTIC 14.407 DEGREES OF FREEDOM 14.00 387.00

APPENDIX F

DESCRIPTIVE STATISTICS - MEANS AND STANDARD DEVIATIONS FOR NON-PSYCHOGRAPHIC VARIABLES ONLY

MEANS

	GROUP =	heavy	light	ALL GPS.
VARIABLE				
245	lang	1.31500	1.38119	1.34826
250	numhh	3.47500	3.39604	3.43532
249	children	3.99000	3.94554	3.96766
276	reg1	0.39000	0.43564	0.41294
277	reg2	0.23500	0.17822	0.20647
278	serstew	0.10500	0.16337	0.13430
279	sersauce	0.08500	0.10396	0.09453
280	serveg	0.29500	0.14851	0.22139
281	sersalad	0.17000	0.16337	0.16667
282	serbreak	0.06500	0.06931	0.06716
283	oftbrek	0.10500	0.12376	0.11443
284	oftlun	0.06500	0.08416	0.07463
285	oftdin	0.75500	0.63366	0.69403
318	oftd	0.69000	0.71287	0.70149
319	ofts	0.02200	0.06436	0.04478
320	oftw	0.07500	0.05446	0.06468
286	pursup	0.74000	0.83663	0.78856
296	ageg	0.07000	0.13366	0.10199
297	age2	0.24500	0.30693	0.27612
298	age3	0.40500	0.32178	0.36318
299	age4	0.16500	0.14356	0.15423
300	y1	0.01000	0.01485	0.01244
301	y2	0.03000	0.04455	0.03731
302	y3	0.07000	0.06931	0.06965
303	y4	0.09000	0.14851	0.11940
304	y5	0.18500	0.16832	0.17662
305	y6	0.16200	0.15347	0.15920
306	y7	0.14500	0.15842	0.15174
307	wfull	0.43500	0.51980	0.47761
308	wpart	0.18500	0.16337	0.17413
309	whome	0.37500	0.31683	0.34578
310	wune	0.00500	0.01980	0.01244
311	hsin	0.05200	0.11386	0.08458
312	hsinb	0.00500	0.00990	0.00746
313	hmarn	0.06500	0.11386	0.08955
314	hwid	0.03500	0.05446	0.04478
315	hmarco	0.16000	0.07921	0.11940
316	hwidco	0.02000	0.01980	0.01990
317	hmarc	0.60500	0.51980	0.56219
COUNTS		200.	202.	402.

STANDARD DEVIATIONS

	GROUP =	heavy	light	ALL GPS.
VARIABLE				
245	lang	0.46568	0.48689	0.47645
250	numphh	1.41757	1.53067	1.47695
259	children	2.15013	2.13057	2.14035
276	reg1	0.48807	0.47707	0.48306
277	reg2	0.42506	0.38365	0.40478
278	serstew	0.30732	0.37942	0.34544
279	sersauce	0.27958	0.30597	0.29314
280	serveg	0.45719	0.35649	0.40969
281	sersalad	0.37658	0.33062	0.35369
282	serbreak	0.44714	0.42461	0.43662
283	oftbrek	0.30732	0.33013	0.31809
284	oftlun	0.24714	0.27832	0.26327
285	oftdin	0.43117	0.48300	0.45795
286	oftd	0.42365	0.47355	0.45060
287	ofts	0.35252	0.34200	0.30639
288	oftw	0.26405	0.53748	0.52635
289	pursup	0.43673	0.37062	0.40648
296	agea	0.25579	0.34114	0.30171
297	age2	0.43117	0.46237	0.44712
298	age3	0.49212	0.48832	0.48031
299	age4	0.37211	0.35152	0.36181
300	y1	0.09675	0.12126	0.11108
301	y6	0.17102	0.20682	0.18986
302	y3	0.25570	0.24761	0.25519
303	y4	0.28600	0.35649	0.32375
304	y5	0.38027	0.37508	0.38220
305	y6	0.37211	0.36133	0.36623
306	y7	0.38092	0.39107	0.39475
307	wfull	0.49700	0.50085	0.49864
308	wpart	0.38027	0.37062	0.38001
309	whome	0.46568	0.43551	0.45077
310	wune	0.07071	0.13967	0.11086
311	hsin	0.22855	0.31843	0.27738
312	hsinb	0.07071	0.09832	0.08624
313	hmarn	0.24714	0.31843	0.28520
314	hwid	0.18424	0.22748	0.20710
315	hmarco	0.36753	0.27073	0.32254
316	hwidco	0.14035	0.13967	0.14001
317	hmarc	0.49008	0.50085	0.49552

APPENDIX G

DESCRIPTIVE STATISTICS - MEANS AND STANDARD DEVIATIONS INCLUDING PSYCHOGRAPHIC VARIABLES

MEANS

VARIABLE	GROUP =	heavy	light	ALL GPS.
61	habit	2.68500	2.78713	2.73632
62	qual	3.93500	3.72277	3.82836
63	same	2.98000	3.06436	3.02239
64	risk	3.23500	3.30198	3.26866
65	litdif	3.32500	3.21782	3.27114
66	impulse	3.22500	3.30198	3.26368
67	lowprice	2.51500	2.72277	2.61940
68	bulk	2.48500	2.51980	2.50249
69	peers	2.11000	2.16832	2.13930
70	new	3.29500	2.93069	3.11194
71	special	3.54500	3.61881	3.58209
72	weight	2.58500	2.55941	2.57214
73	appear	4.03500	3.84653	3.94030
74	list	3.40500	2.65347	3.02736
75	fresh	3.94000	3.80693	3.87313
86	fsilver	0.15500	0.14851	0.15174
88	fdenny	0.50500	0.48515	0.49502
90	fwool	0.46000	0.39109	0.42537
97	qsilver	0.15500	0.14851	0.15174
99	qdenny	0.59000	0.60891	0.59950
101	qwool	0.41000	0.42079	0.41542
108	esilver	0.02000	0.06436	0.04229
110	edenny	0.07500	0.10396	0.08955
112	ewool	0.22000	0.24257	0.23134
119	csilver	0.08500	0.08416	0.08458
121	cdenny	0.23500	0.20297	0.21891
123	cwool	0.00500	0.02475	0.01493
130	lsilver	0.06500	0.05941	0.06219
132	ldenny	0.38500	0.34158	0.36318
134	lwool	0.26500	0.24752	0.25622
141	msilver	0.07000	0.06931	0.06965
143	mdenny	0.39500	0.37129	0.38308
145	mwool	0.42500	0.36139	0.39303
152	psilver	0.07500	0.05446	0.06468
154	pdenny	0.26000	0.22772	0.24378
156	pwool	0.23500	0.20297	0.21891
159	place	2.52000	2.32178	2.42040
160	flavour	4.15500	4.10396	4.12935
161	everyday	2.86000	2.36139	2.60945
162	poison	2.25500	2.42574	2.34080
163	differ	4.19000	4.14356	4.16667
164	luxury	2.56000	3.27228	2.91791
165	vits	3.73000	3.73762	3.73383
166	expense	2.69500	3.18812	2.94279
167	slim	3.86500	3.82178	3.84328
168	conven	4.15000	4.11386	4.13184
169	notfam	2.33500	2.35149	2.34328
170	dontlast	2.47500	2.64356	2.55970
171	occasion	2.00000	2.34653	2.17413
172	blends	4.04000	4.00990	4.02488
173	cookaway	2.59000	2.71782	2.65423
174	nochol	3.91000	3.90099	3.90547
175	gofar	3.47000	3.50495	3.48756
176	fibre	3.00000	3.17822	3.08955
177	ill	3.26000	3.50495	3.38308
178	extraord	4.03000	4.08416	4.05721
179	invite	3.96000	3.88614	3.92289
180	hobby	2.84000	2.78218	2.81095
181	express	3.44000	3.40594	3.42289
182	read	3.70000	3.66832	3.68408
183	praise	3.56000	3.50000	3.52985
184	littime	2.75500	2.77228	2.76368
185	advice	3.19000	3.02970	3.10945
186	import	3.49000	3.18317	3.33582
187	talk	2.67000	2.60891	2.63930
188	offers	2.76000	2.65842	2.70896
189	experi	3.56000	3.32673	3.44279
190	eatout	2.47000	2.38614	2.42786
191	source	2.93000	2.72277	2.82587
192	judge	2.85000	2.97030	2.91045
193	mags	3.20500	3.22277	3.21393
194	timeshop	3.17500	3.16832	3.17164
195	seekadv	3.12000	3.24257	3.18159
196	creative	3.55500	3.38614	3.47015
197	simple	2.98000	3.25743	3.11940
198	timecook	2.62500	2.47030	2.54726
199	influen	3.27500	3.19307	3.23383
200	flop	3.59000	3.71287	3.65174
201	freqnt	3.26500	3.07426	3.16915
202	magrecp	3.04000	3.03960	3.03980
203	nolike	3.08000	3.24752	3.16418
204	centred	2.57500	2.41089	2.49254
205	enjoypl	3.79000	3.59901	3.69403
206	maid	2.32000	2.41089	2.36567
207	relat	3.24000	3.30693	3.27363
208	complic	2.79000	2.87624	2.83333
209	nutrit	3.28500	3.35149	3.31841
210	love	3.35500	3.25248	3.30348
211	chol	3.69500	3.64356	3.66915
212	budget	2.95000	3.31188	3.13184
213	exotic	2.87000	2.72277	2.79602
214	calor	3.14500	3.02970	3.08706
215	artifi	2.79500	2.79733	2.79617
216	speed	3.47500	3.66337	3.56965
217	wine	3.38000	3.40099	3.39055
218	economy	3.23500	3.36139	3.29851
219	prinut	3.59000	3.63366	3.61194
220	basic	3.74500	3.78713	3.76617
221	limitcal	3.35500	3.24752	3.30100
222	check	2.83500	2.75248	2.79353
223	micro	2.62500	2.80198	2.71393
224	nourish	3.36000	3.30693	3.33333
225	cost	3.04500	3.15347	3.09950
226	nature	3.42000	3.45050	3.43532
227	redmeat	3.63500	3.55446	3.59453
228	ethnic	2.83500	2.68317	2.75871
229	kiloj	2.80500	2.83168	2.81841
230	rte	2.50000	2.60396	2.55224
231	mins	3.57500	3.54950	3.56219
232	longer	3.50000	3.43069	3.46517
233	yalmon	3.29500	3.48515	3.39055
234	limchol	3.76000	3.66832	3.71393
235	herbs	3.88500	3.85149	3.86816
236	chem	3.34000	3.38614	3.36318
237	selfcal	3.22000	3.10891	3.16418
238	raw	4.11500	4.05941	4.08706
239	needrte	2.37000	2.38614	2.37811
240	enjoypre	3.53000	3.46040	3.49502
241	person	2.72500	2.61386	2.66915
242	eatquick	2.75000	2.76238	2.75622
243	response	3.85500	3.90099	3.87811
245	lang	1.31500	1.38119	1.34826

250	numbhh	3.47500	3.39604	3.43532
318	oftd	0.26000	0.21287	0.20176
319	ofts	0.02500	0.06436	0.04478
320	oftw	0.07500	0.05446	0.06468
249	children	3.99000	3.94554	3.96766
276	reg1	0.39000	0.43564	0.41294
277	reg2	0.23500	0.17822	0.20647
278	serstew	0.10500	0.17327	0.13930
279	sersauce	0.08500	0.10396	0.09453
280	serveg	0.29500	0.14851	0.22130
281	sersalad	0.17000	0.16337	0.16667
282	serbreak	0.06500	0.06931	0.06716
283	oftbrek	0.10500	0.12376	0.11443
284	oftlyn	0.06500	0.08416	0.07463
285	oftdin	0.27500	0.53366	0.64403
286	pursup	0.74000	0.83663	0.78856
287	penease	0.20000	0.24257	0.22139
288	penhealt	0.22000	0.15347	0.18657
289	pentaste	0.18000	0.21782	0.19900
290	penextra	0.12000	0.19802	0.15920
291	benver	0.09500	0.04455	0.06965
292	abrand	0.06200	0.11881	0.09204
293	aprice	0.13500	0.14356	0.13930
294	aqual	0.16500	0.19307	0.18408
295	afresh	0.58500	0.53960	0.56219
296	age8	0.07000	0.13366	0.10199
297	age6	0.24500	0.30693	0.27612
298	age5	0.40200	0.32178	0.36318
299	age4	0.16500	0.14356	0.15422
300	Y1	0.01000	0.01485	0.01244
301	Y2	0.03000	0.04455	0.03731
302	Y3	0.07000	0.06931	0.06965
303	Y4	0.09000	0.07921	0.11940
304	Y5	0.18200	0.12852	0.17289
305	Y6	0.16500	0.15347	0.15920
306	Y7	0.17500	0.15842	0.16667
307	wfull	0.43500	0.51980	0.47761
308	wpart	0.18500	0.16337	0.17413
309	whome	0.37500	0.25248	0.28358
310	wune	0.00500	0.01980	0.01244
311	hsin	0.05200	0.11386	0.08458
312	hsinb	0.00500	0.00990	0.00746
313	hmarn	0.06500	0.11386	0.08955
314	hwid	0.03500	0.05446	0.04478
315	hmarco	0.16000	0.07921	0.11940
316	hwidco	0.02000	0.01980	0.01990
317	hmarc	0.60500	0.51980	0.56219
COUNTS		200.	202.	402.

STANDARD DEVIATIONS

VARIABLE	GROUP = heavy	light	ALL GPS.
61 habit	0.98009	1.02663	1.00374
62 qual	0.68051	0.80569	0.74604
63 same	1.06077	1.05605	1.05840
64 risk	1.05610	1.02840	1.04227
65 litdif	1.03184	1.02315	1.02749
66 impulse	1.06303	1.01378	1.03857
67 lowprice	0.94565	1.01353	0.98034
68 bulk	0.94032	0.94743	0.94390
69 peers	0.57406	0.65516	0.61615
70 new	1.02137	1.05338	1.03757
71 special	1.05525	0.96105	1.00901
72 weight	1.02862	1.00691	1.01777
73 appear	0.73926	0.83530	0.78898
74 list	1.00800	0.98684	0.99742
75 fresh	0.69195	0.78376	0.73951
86 fsilver	0.36281	0.35649	0.35965
88 fdenny	0.50123	0.50102	0.50112
90 fwool	0.49965	0.48921	0.49443
97 qsilver	0.36281	0.35649	0.35965
99 qdenny	0.49307	0.48921	0.49113
101 dwool	0.49307	0.49491	0.49400
108 esilver	0.14035	0.24600	0.20052
110 edenny	0.26405	0.30597	0.28588
112 ewool	0.41529	0.42970	0.42259
119 csilver	0.27958	0.27832	0.27895
121 cdenny	0.42506	0.40321	0.41423
123 cwool	0.07071	0.15576	0.12115
130 lsilver	0.24714	0.23697	0.24209
132 ldenny	0.48782	0.47542	0.48163
134 lwool	0.44244	0.43265	0.43755
141 msilver	0.25579	0.25461	0.25519
143 mdenny	0.49008	0.48435	0.48721
145 mwool	0.49558	0.48160	0.48860
152 psilver	0.26405	0.22748	0.24635
154 pdenny	0.43973	0.42040	0.43013
156 pwool	0.42506	0.40321	0.41423
159 place	1.05602	0.91989	0.98995
160 flavour	0.41453	0.43945	0.42723
161 everyday	1.02256	0.84235	0.93635
162 poison	0.86238	0.86210	0.86224
163 differ	0.46395	0.39168	0.42900
164 luxury	0.99567	1.04626	1.02140
165 vits	0.72784	0.71617	0.72200
166 expense	0.99343	1.03868	1.01642
167 slim	0.71367	0.75832	0.73644
168 conven	0.43410	0.40137	0.41797
169 notfam	0.90380	0.85822	0.88119
170 dontlast	0.96646	0.99335	0.98007
171 occasion	0.52092	0.85152	0.70665
172 blends	0.45765	0.43469	0.44626
173 cookaway	0.98323	1.00969	0.99661
174 nochol	0.62759	0.53727	0.58395
175 gofar	0.98179	0.91558	0.94910
176 fibre	0.89105	0.82734	0.85963
177 ill	1.06209	0.99375	1.02832
178 extraord	0.57511	0.51625	0.54633
179 invite	0.56569	0.69961	0.63652
180 hobby	1.17101	1.12506	1.14815
181 express	0.97011	0.94293	0.95655
182 read	0.98225	0.95880	0.97054
183 praise	1.00571	0.94237	0.97440
184 littime	1.09589	1.10071	1.09832
185 advice	1.05330	1.02657	1.03995
186 import	0.99238	1.04196	1.01760
187 talk	0.97254	0.96739	0.96995
188 offers	1.05259	0.99609	1.02459
189 experi	0.97527	0.98354	0.97943
190 eatout	0.98690	0.94601	0.96657
191 source	1.04910	1.01353	1.03138
192 judge	1.06450	1.04100	1.05276
193 mags	0.99394	0.98994	0.99193
194 timeshop	1.20900	1.20587	1.20743
195 seekadv	1.00531	0.99029	0.99779
196 creative	0.91716	0.99721	0.95822
197 simple	1.04165	1.02848	1.03505
198 timecook	1.07244	0.97817	1.02615
199 influen	0.99212	0.99118	0.99165
200 flop	1.10363	1.02541	1.06504
201 freqnt	1.01979	1.00220	1.01099
202 magrecp	1.03623	1.03588	1.03605
203 nolike	1.08605	1.09186	1.08897
204 centred	1.10475	1.07179	1.08831
205 enjoypl	0.81191	0.81197	0.81194
206 majd	1.02609	1.07179	1.04930
207 relat	0.95759	0.99494	0.97654
208 complic	1.06846	1.06949	1.06898
209 nutrit	1.00440	0.97237	0.98843
210 love	0.96104	1.00774	0.98478
211 chol	0.94149	0.93664	0.93906
212 budget	1.04545	1.03508	1.04025
213 exotic	1.06714	1.03778	1.05249
214 calor	1.05810	1.01683	1.03757
215 artifi	1.01237	0.99267	1.00252
216 speed	0.94010	0.87277	0.90690
217 wine	1.02511	1.10296	1.06494
218 economy	1.02225	0.98400	1.00321
219 prinut	0.86350	0.83723	0.85040
220 basic	0.65737	0.66110	0.65924
221 limitcal	0.98684	0.99157	0.98922
222 check	1.05515	1.00651	1.03099
223 micro	1.04875	1.05585	1.05232
224 nourish	0.97218	0.99993	0.98622
225 cost	1.01890	1.03242	1.02572
226 nature	0.93701	0.89777	0.91750
227 redmeat	0.90879	0.99226	0.95165
228 ethnic	1.08335	1.07833	1.08083
229 kiloj	1.00099	1.02767	1.01449
230 rte	0.95633	1.03260	0.99539
231 mins	0.83538	0.83459	0.83499
232 longer	0.93508	0.93450	0.93479
233 valmon	0.99141	0.98863	0.99001
234 limchol	0.79090	0.84870	0.82045
235 herbs	0.77120	0.80281	0.78724
236 chem	1.00970	0.96682	0.98838
237 selfcal	1.08512	1.06412	1.07462
238 raw	0.61945	0.59554	0.60754
239 needrte	0.91503	0.95125	0.93341
240 enjoypre	0.93996	0.89827	0.91924
241 person	1.05591	0.97705	1.01705
242 eatquick	0.99117	0.97887	0.98501
243 response	0.69743	0.62302	0.66109
245 lang	0.46568	0.48689	0.47645
250 numbhh	1.41754	1.52967	1.47495

318	oftd	0.46365	0.45355	0.45860
319	ofts	0.15652	0.24600	0.20639
320	oftw	0.26405	0.22748	0.24635
349	children	2.15012	2.13057	2.14032
576	reg1	0.48897	0.49707	0.49306
577	reg2	0.42506	0.38365	0.40478
578	serstew	0.30725	0.37625	0.34244
579	sersauce	0.27958	0.30597	0.29314
580	serveg	0.45719	0.35649	0.40969
581	sersalad	0.37658	0.37062	0.37359
582	serbreak	0.24714	0.25461	0.25092
583	oftbrek	0.30733	0.33013	0.31866
584	oftlun	0.24714	0.27835	0.26267
585	oftdin	0.43117	0.48300	0.45795
586	pursup	0.43973	0.37062	0.40648
587	benease	0.40100	0.42970	0.41567
588	benhealt	0.41529	0.36133	0.38911
589	bentaste	0.38515	0.41378	0.39980
590	benextra	0.36378	0.39950	0.38187
591	benver	0.26395	0.24684	0.25524
592	abrend	0.24714	0.32437	0.28855
593	aprice	0.34258	0.35152	0.34710
594	aqual	0.40719	0.38566	0.39644
595	afresh	0.49396	0.49967	0.49684
596	age1	0.32548	0.27114	0.30171
597	age2	0.43117	0.49237	0.46712
598	age3	0.40212	0.48832	0.48031
599	age4	0.37211	0.35152	0.36191
600	Y1	0.09975	0.12126	0.11108
601	Y2	0.17102	0.20682	0.18982
602	Y3	0.25540	0.25291	0.25416
603	Y4	0.28690	0.32649	0.30737
604	Y5	0.38927	0.37508	0.38220
605	Y6	0.37211	0.36133	0.36673
606	Y7	0.38092	0.36604	0.37352
607	wfull	0.49700	0.50085	0.49892
608	wpart	0.38927	0.37062	0.38001
609	whome	0.46568	0.43551	0.45077
610	wune	0.07071	0.13067	0.11086
611	hsin	0.22855	0.31843	0.27738
612	hsinb	0.07071	0.09926	0.08624
613	hmarn	0.24714	0.31843	0.28520
614	hwid	0.18464	0.22748	0.20710
615	hmarco	0.36733	0.27073	0.32254
616	hwidco	0.14035	0.13967	0.14001
617	hmarc	0.49008	0.50085	0.49552

APPENDIX H

RESULTS OF THE CROSS-TABULATION ANALYSES

***** PERCENTS OF ROW TOTALS -- TABLE 32

usage	mserve												
	starter	main	stew	sauce	veg	salad	toast	break	omellete	pizza	pasta	curry	soup
heavy	4.0	2.0	10.5	8.5	29.5	17.0	1.5	6.5	2.0	2.5	3.0	0.0	0.0
light	3.5	2.5	17.3	10.4	14.9	16.3	4.0	6.9	1.5	2.5	5.4	0.5	1.0
TOTAL	3.7	2.2	13.9	9.5	22.1	16.7	2.7	6.7	1.7	2.5	4.2	0.2	0.5

usage	mserve (continued)							
	stirfry	stuff	pies	fondue	braai	repla	rice	other	TOTAL
heavy	14	2	0	0	4	2	4	0	200
light	12	2	0	0	10	0	3	0	202
TOTAL	26	4	0	0	14	2	7	0	402

***** PERCENTS OF ROW TOTALS -- TABLE 33

usage	mealoft						
	break	lunch	famdinn	snacks	outdoor	entert	alt	TOTAL
heavy	10.5	6.5	75.5	1.5	3.5	2.5	0.0	100.0
light	12.4	8.4	63.4	0.5	8.4	6.9	0.0	100.0
TOTAL	11.4	7.5	69.4	1.0	6.0	4.7	0.0	100.0

***** PERCENTS OF ROW TOTALS -- TABLE 34

usage	househol							
	single	singpre	married	wid	marold	widgr	marchd	widchd	TOTAL
heavy	5.5	0.5	6.5	3.5	16.0	2.0	60.5	5.5	100.0
light	11.4	1.0	11.4	5.4	7.9	2.0	52.0	8.9	100.0
TOTAL	8.5	0.7	9.0	4.5	11.9	2.0	56.2	7.2	100.0

***** PERCENTS OF ROW TOTALS -- TABLE 35

usage	purchase				
	super	green	cafe	other	TOTAL
heavy	74.0	26.0	0.0	0.0	100.0
light	83.7	15.3	1.0	0.0	100.0
TOTAL	78.9	20.6	0.5	0.0	100.0

***** PERCENTS OF ROW TOTALS -- TABLE 36

usage	list			
	da	n	a	TOTAL
heavy	32.0	2.0	66.0	100.0
light	66.3	1.5	32.2	100.0
TOTAL	49.3	1.7	49.0	100.0

***** PERCENTS OF ROW TOTALS -- TABLE 37

usage	luxury			
	da	n	a	TOTAL
heavy	70.0	3.0	27.0	100.0
light	36.1	5.9	57.9	100.0
TOTAL	53.0	4.5	42.5	100.0

***** PERCENTS OF ROW TOTALS -- TABLE 38

usage	everyday			
	da	n	a	TOTAL
heavy	55.0	4.5	40.5	100.0
light	78.7	2.0	19.3	100.0
TOTAL	66.9	3.2	29.9	100.0

***** PERCENTS OF ROW TOTALS -- TABLE 39

usage	occasion			
	da	n	a	TOTAL
heavy	95.0	1.5	3.5	100.0
light	79.7	1.5	18.8	100.0
TOTAL	87.3	1.5	11.2	100.0

***** PERCENTS OF ROW TOTALS -- TABLE 40

usage	budget			
	da	n	a	TOTAL
heavy	52.0	1.5	46.5	100.0
light	35.1	1.5	63.4	100.0
TOTAL	43.5	1.5	55.0	100.0

***** PERCENTS OF ROW TOTALS -- TABLE 41

usage	ill			
	da	n	a	TOTAL
heavy	35.5	9.5	55.0	100.0
light	24.8	7.4	67.8	100.0
TOTAL	30.1	8.5	61.4	100.0

***** PERCENTS OF ROW TOTALS -- TABLE 42

usage	fibre			
	da	n	a	TOTAL
heavy	35.5	28.5	36.0	100.0
light	25.7	31.7	42.6	100.0
TOTAL	30.6	30.1	39.3	100.0

***** PERCENTS OF ROW TOTALS -- TABLE 43

usage	simple			
	da	n	a	TOTAL
heavy	50.5	4.0	45.5	100.0
light	36.6	4.5	58.9	100.0
TOTAL	43.5	4.2	52.2	100.0

***** PERCENTS OF ROW TOTALS -- TABLE 44

usage	firstb									
	easy	value	health	taste	nonfat	extra	nature	versat	nutri	extend	TOTAL
heavy	20.0	2.0	22.0	18.0	7.0	12.0	1.5	9.5	4.5	3.5	100.0
light	24.3	3.0	15.3	21.8	7.4	19.8	1.0	4.5	1.0	2.0	100.0
TOTAL	22.1	2.5	18.7	19.9	7.2	15.9	1.2	7.0	2.7	2.7	100.0

***** PERCENTS OF ROW TOTALS -- TABLE 45

usage	mostoft										
	meadow	silver	cordon	medal	chant	denny	chef	high	count	wool	none	TOTAL
heavy	0.0	2.5	0.5	2.5	2.0	69.0	1.0	2.5	0.5	7.5	12.0	100.0
light	0.5	6.4	0.0	3.0	0.5	71.3	0.0	1.0	0.5	5.4	11.4	100.0
TOTAL	0.2	4.5	0.2	2.7	1.2	70.1	0.5	1.7	0.5	6.5	11.7	100.0

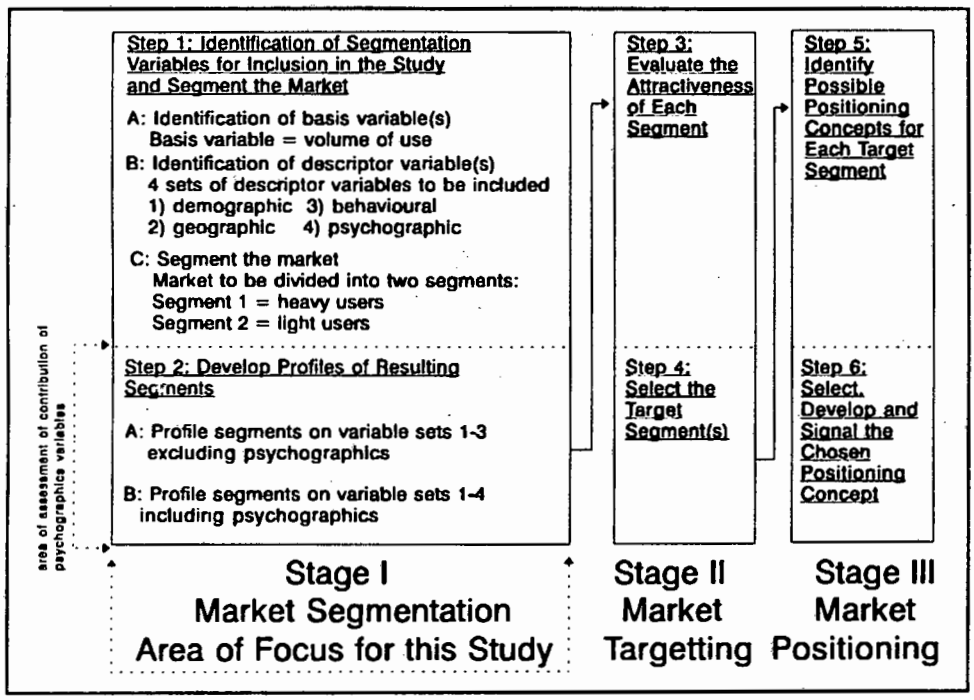
PART II

IMPLEMENTATION OF THE MARKET SEGMENTATION PROCESS

INTRODUCTION

Part II of Chapter 8 addresses the main problem of this thesis, that is, the author will critically assess the contribution of psychographic variables in the profiling stage (Step 2) of a market segmentation study (Refer fig 8.1 below).

Figure 8.1 Identification of Tasks in the Implementation of a Market Segmentation Strategy for the South African Fresh Mushroom Industry



In section I the author will briefly table the results of Step I in the segmentation process (Refer figure 8.1). The fresh mushroom market was segmented (a priori) on the basis of volume of use into two groups - namely a group of heavy users and a group of non-heavy users of fresh mushrooms. Sections 2-4 will focus on Step II in the segmentation process (Refer fig 8.1). Through the use of discriminant analysis and cross tabulations, the contribution of the psychographic measures to identifying and describing the two user groups will be critically addressed. In the final section 5, the author will comment on the reliability and validity issues that pertain to this study.

2. Contribution of Non Psychographic Variables to Segmentation Process.

In section 1 the market was divided into 2 groups:

Group 1 : Heavy Users

Group 2 : Light Users

In order to identify if there were any distinguishing characteristics between these 2 groups that were also related to the basis variable[2], the author performed discriminant analysis. Initially only the non psychographic variables (Sets 1-3) were included in order to first assess their contribution in the profiling stage of the segmentation process.

2.1 Discriminant Analysis Procedure - Non Psychographic Variables

The technique of discriminant analysis allows one to identify the significant distinguishing characteristics of heavy users versus light users and gain a measure of their relative importance (Affifi et al, 1990). Hence, in the first step of this analysis 200 heavy users were compared with 202 light users on 12 demographic, geographic and behavioural variables. The 12 demographic, geographic and behavioural variables selected are detailed in Table 8.1.

[2] The readers attention is drawn to Chapter 3, section 7 for the definition of a descriptor variable.

Table 8.1: Classification of Non Psychographic Variables for Discriminant Analysis

VARIABLES	MEASURE	NAME OF MEASURE	Y/N TRANSFORMED	DUMMY VARIABLES
Demo- (1) graphic	age	age	->	age a,age 2 age 3, age 4
	language	lang		
	income	income	->	Yl,Y2,Y3,Y4,Y5,Y6,Y7
	work-status	work	->	wfull,wpart, whome,wune,
	Stage in F.L.C.	househol	>	hmarco,hwidco,hmarc,hsin, hsinb,hmarn, hwid
	No.of children > 16	children		
	No. in house-hold	numbhh		
Geo- (2) graphic	Region	region	->	Reg 1, Reg 2
Be- (3) havioural	Most freq. Brand Usage	Mostoft	->	oftd, ofts, oftw.
	Most freq. Usage Situation	Mserve	->	sersalad, serbreak, serstew, sersauce, serveg
	Most freq. Usage Occ.	Mealoft	->	oftbrek, oftlun, oftdin
	Pur-chase loc.	Purchase	->	pursup

The author wishes to draw the readers attention to the following three points:

1) There were a number of demographic, geographic & behavioural measures that were NOT interval independent variables. The nominal independent variables of age, income, work, househol,

region, mostoft, mserve, mealoft and purchase were therefore converted to dummy variables in order to perform the discriminant analysis (Refer Chapter 7, Part II).

2) In creating the dummy variables the following measures were grouped into a single category as identified below:

1) Brand used Most Often:

Dummy variables were created for the 3 national brands and an 'all other' category. (The 3 national brands accounted for 81% of all respondents).

2) Most frequent Usage Situation:

Dummy variables created for stews, sauces, vegetable, salads, breakfast and an 'all other' category.

(The above 5 usage situations selected accounted for 70% of respondents).

3) Most frequent Usage Occasion :

Dummy variables created for breakfast, lunch, family dinner and an 'all other' category.

(The above 3 usage occasions accounted for 88% of respondents).

4) Purchase Location :

Dummy variables created for supermarkets and an 'all other' category. 79% of respondents used supermarkets.

3) The following demographic, behavioural & geographic variables were omitted from the analysis purposefully:

1) Aided awareness on all brands
2) All brands ever used
3) Other usage situations
4) Other meal occasions
5) Area zones

The reasons were two-fold:

Firstly, it was felt that the excessive degree of detail provided by certain of the above variables was not necessary.

Secondly, 'all multiple response variables' were omitted when there was a 'single - most frequent' response alternative. (For example, 'most frequent' usage situation and 'other' usage situation.)
The multiple responses would not only have created further complications in coding but were already represented by the single mention alternative.

2.2 Identification of Significant Distinguishing Characteristics of the Two User Groups Based on NON-PSYCHOGRAPHIC VARIABLES

Based on the 12 non psychographic variables, discriminant analysis was performed on the two user groups.
A copy of the BMDP7M stepwise discriminant analysis runstream is in Appendix D. Briefly the steps followed were as follows:

At Step 0, the largest F to enter is for 'serveg' so it enters at Step 1; 'hmarco' enters next at Step 2, 'hmarc' at Step 3, 'oftdin' at Step 4 and 'pursup' at Step 5. After this step, no more variables enter since all the F to enter levels are less than 4.

A discussion and interpretation of the findings follows.[3]

Firstly the author examined the descriptive measures obtained for each of the 2 groups.
Appendix F lists the mean and standard deviations for each variable in both groups.

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[3] The author wishes to note that in section 2, the findings will simply be presented. In section 4, when profiling the segments on their distinguishing characteristics, interpretation of the findings will be detailed.

The descriptive variables provided the first indications of which variables distinguished between heavy users and light users. Large differences in means on a particular variable suggest that the variable is an important discriminator between the groups.

Taking the above into account, the data reveals that the heavy user group tends to have a higher percentage of people married with children, larger households and non-working housewives; a slightly higher skew to the upper income groups, english speaking and older age categories; and a lower likelihood of purchasing exclusively at supermarkets. Heavy users are more likely to use mushrooms most frequently as a vegetable and at family dinners.

Light users in contrast appear more likely to fall into the two younger age groups (< 49 yrs) and in the lower four income groups. Light users are most likely to purchase at supermarkets and use mushrooms in stews.

The standard deviations of the 2 groups are similar except for three variables : Number in household (numbhh), Serve as vegetables (serveg), and married with older children (hmarco) where they are only slightly different.

The above discussion contributed somewhat to the author's understanding of the differences between the 2 groups. At this stage, however, the variables were viewed in isolation and it was therefore necessary to proceed to the next step to assess the results of the discriminant analysis in which all 12 variables were analyzed simultaneously.

Discriminant analysis produces 3 measures that identify which variables distinguish between the 2 groups and the degree of importance of these variables. These are:

1) The F. Matrix
2) The Discriminant Function and Discriminant Coefficients.
3) The Classification Matrix.

1) The F. Matrix

In order to comment on the F. Matrix it is first necessary to examine Table 8.2. This table provides a list of the significant demographic and behavioural variables in order of importance based on their F to enter values.

Table 8.2 SUMMARY Table Discriminant Analysis - Non psychographic Variables

STEP NO.	VAR. ENTERED REMOVED	F VALUE TO ENTER	NO. OF VAR INC	U- STAT	APPROX F - STAT.	DEGREE OF FREEDOM	
1	230 serveg	12,849	1	0,9689	12,848	1.0	400,0
2	315 hmarco	6,714	2	0,9528	9,873	2,0	399,0
3	317 hmarc	7,960	3	0,9342	9,350	3,0	398,0
4	285 oftdin	6,925	4	0,9181	8,848	4,0	397,0
5	286 pursup	4,649	5	0,9075	8,073	5,0	396,0

There are 5 variables whose F to enter value was greater than 4; these 5 variables are significant in the classification of mushroom users into the heavy group or light group and significant in distinguishing between consumers in the heavy user group and light user group.

Of the five significant variables, three are sourced from behavioural measures and two are sourced from demographic measures.

Specifically the 3 behavioural variables are:

1) Serveg - Usage situation variable. It specifically refers to those respondents who use mushrooms most frequently as a vegetable accompaniment

2) Oftdin - Usage occasion variable. It specifically refers to those respondents who serve mushrooms most frequently at family dinners.

3) Pursup - Purchase location variable. It specifically refers to those respondents who purchase their mushrooms most frequently from a supermarket.

The two demographic variables both refer to stages in the family life cycle. These are:

1)hmarc - refers to those respondents who are married with children at home.

2)hmarco- refers to those who are married with older children who have already left home.

Table 8.2 also reveals that the behavioural variable - 'serveg' was the most significant variable that distinguished between heavy users and light users.

It may be concluded from Table 8.2 that of the twelve non psychographic variables included in the discriminant analysis, five variables (three behavioural and two demographic) were found to be significant in distinguishing between heavy users and light users of mushrooms.

In order to assess how effective these variables were in classifying mushrooms consumers as either heavy users or light users it is necessary to refer to the F-Matrix in Figure 8.3

Figure 8.3 F-Matrix - Discriminant Analysis - Non -Psychographic Variables

	Heavy Users	Degrees of freedom
Light Users	8,07	5 396

In simplified terms, the F. Matrix calculates the mean value for heavy users based on the five significant variables and the mean value for light users based on the significant variables. It then computes the difference between the 2 means (F Statistic) as a measure of how different the 2 groups are.

In this case the Value of 'F' at the last step is given as 8,07 with 5 and 396 degrees of freedom (Refer Table 8.2).

A large significant 'F' indicates that the means of the 2 groups are different on the significant variables and hence the variables are important in separating the 2 groups : A small F indicates that the significant variables are essentially worthless as predictors of group membership. These variables would therefore, by definition, not be useful descriptor variables in the segmentation process.

Since the F Statistic = 8,07 it indicates that there does appear to be at least some difference between the 2 groups based on the demographic and behavioural variables. In order to further evaluate this result (based on the non psychographic variables only) it shall be compared with the result in the next section (based on the inclusion of psychographic variables).

2) The Discriminant Function and Discriminant Coefficients

The discriminant function is useful for the classification of respondents into either the heavy user or light user group and provides an indication of which variables contribute to the classification.

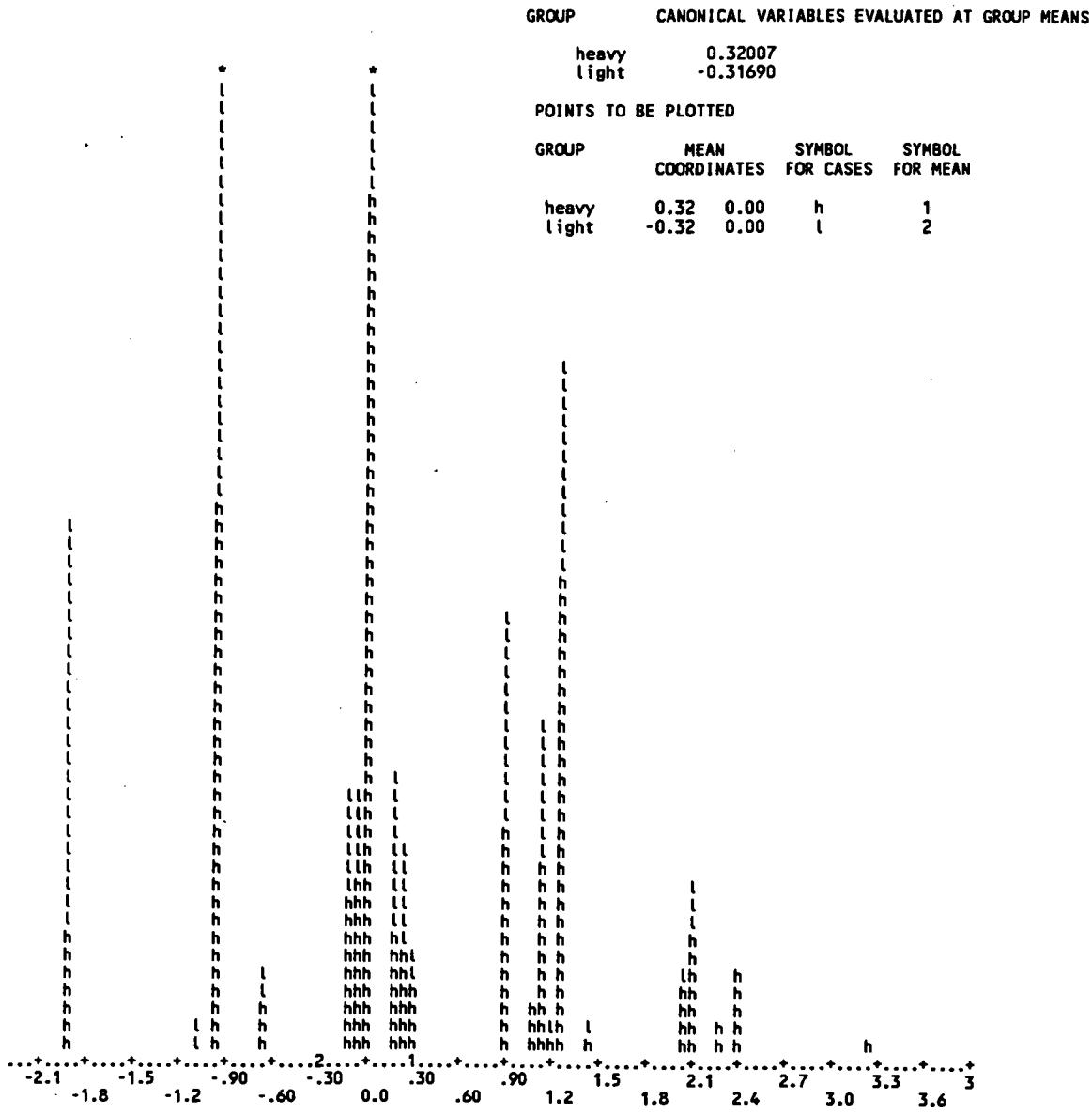
The **discriminant function** based on the non psychographic variables for this study reads as follows:

Y = -1,05581 + 1,24107(Serveg) + 0,94936(Oftdin)- 0,87231(Pursup) + 2,12016(hmarco) + 0,99055(hmarc)

The author shall first examine the discriminant function in terms of its classification 'powers' as detailed above. Group membership is based on each respondents' score on the discriminant function. Specifically if a

persons score is close to the mean of the heavy users, then the respondent would be classified as a heavy user and vice versa. Calculating the discriminant function for each respondent results in the canonical variables. These have been plotted on histograms in Figure 8.4. The heavy user group is labelled 'h' and the light group is labelled 'l'.

Figure 8.4 Histogram of Canonical Variables (Non-Psychographic Measures)



From Figure 8.4 it can be seen that the histogram is somewhat spread out but there is evidence of merging between heavy and light users - specifically one cannot see two clearly discernable histograms for the two user groups. This result shall be compared in the next section based on the inclusion of the psychographic variables.

The discriminant function also indicates the relative contribution of each variable to the classification of respondents into either the heavy user group or light user group. In order to assess the contribution of each of the five significant non psychographic variables it is necessary to examine their discriminant coefficients calculated from the discriminant function (Refer Table 8.3).

Table 8.3 Discriminant Coefficients for the Significant Demographic and Behavioural Variables

VARIABLES	COEFFICIENTS FOR CANONICAL VARIABLES
230 serveg	1.24107
285 oftdin	0.94936
286 pursup	-0.87231
315 hmarco	2.12016
517 hmarc	0.99055

From Table 8.3 it may be concluded that four of the five variables are significant in distinguishing heavy users (viz serveg, oftdin, hmarco & hmarc) while only 1 variable (pursup) is significant in distinguishing light users.

3) The Classification Matrix

A third measure to assess the significance of the non psychographic variables in the identifying and profiling of heavy users and light users is the Classification Matrix - Refer Table 8.4

Table 8.4 The Classification Matrix

GROUP	PERCENT CORRECT CLASSIFIED	NUMBER OF CASES CLASSIFIED INTO GROUP -	
		HEAVY	LIGHT
Heavy Users	70.0	140	60
Light Users	52.5	96	106
TOTAL	61.2	236	166

Table 8.4 is an indication of how successful the discriminant function would have been in classifying the same observations used to form the function back into their respective group.

Specifically **140 respondents** were **correctly classified** as **heavy users** and **106 respondents** were **correctly classified** as **light users**. The total number of correct predictions based on the five significant demographic and behavioural variables only is 140 + 106 = 246. Since there were 402 observations in all 246/402 = 61,2% is a measure of how effective the demographic and behavioural variables were in predicting whether respondents were heavy users or light users.

The total percentage correctly classified is therefore a summary measure of the value of the non psychographic variables in predicting group membership. Table 8.4 reveals that the total percentage correctly classified based on the non psychographic variables = 61,2%

The classification matrix in Table 8.4 uses the same observations to examine the ability of the discriminant function to correctly classify

observations as were used to create the discriminant function. Such a procedure can however often produce an upward bias in the percentage of respondents correctly classified.

A method used to overcome this problem is called the Jackknife Classification procedure.
In this method, 1 observation from the first group is excluded and the difference is then computed on the basis of the remaining observations. This procedure is then repeated for each observation. According to Affifi and Clark this method should produce nearly unbiased estimates (Affifi and Clark,1990 p 292).

Table 8.5 reveals results of the Jackknife Classification procedure.

Table 8.5 Jackknifed Classification Based on Non psychographic Variables

GROUP	PERCENTAGE CORRECT	NUMBER OF CASES CLASSIFIED INTO GROUPS	
		HEAVY	LIGHT
Heavy	46.0	92	108
Light	52.5	96	106
TOTAL	49.3	188	214

From Table 8.5 it can be seen that only **49,3%** of the respondents were correctly classified - specifically 46% of heavy users and 52% of light users.

2.3 Summary of Discriminant Analysis Findings - Non psychographic Variables

Based on the three measures detailed in section 2.2 the author concludes as follows:

Discriminant analysis performed using only the non psychographic variables

identified five variables that were significant in distinguishing heavy users of mushrooms from light users of mushrooms.

Specifically three of these variables were sourced from behavioural measures and the remaining two were sourced from demographic measures.

The most significant variable in discriminating between these two groups was 'serveg'. This is a behavioural variable that measures the most frequent usage application of mushrooms as a vegetable accompaniment.

Based on the Jackknife Classification Matrix these five variables correctly classified only 49% of respondents into either the Heavy user group or Light user group. The total unexplained variance based only on non psychographic variables = 51%.

In line with the objectives of this study, these findings had to be compared with those based on the addition of the psychographic variables to the discriminant analysis. This will be discussed in the following section.

3. Contribution of the Psychographic Variables to the Segmentation Process

In order to assess the contribution of the psychographic variables to the segmentation process it was necessary to repeat the discriminant analysis but to include in the analysis (in addition to the 12 non psychographic variables)the psychographic variables.

3.1 Discriminant Analysis Procedure - Addition of the Psychographic Variables

One hundred and twenty three psychographic variables were selected for the second phase of the discriminant analysis. These are detailed in Table 8.6 overleaf.

Table 8.6 Classification and Description of Psychographic Variables for Discriminant Analysis

CLASS	TYPE	VAR.NAME	TRANSFORMED	DUMMY VARIABLES
Psyco-graph-ics	Shopping styles	habit to fresh (Ques. 14, 1-15) All 15 Variables included		
	Benefits	firstb	->	benease, benhealt, bentaste, benextra, benver
	Product Attribute Assoc.	firsta	->	abrand, aprice, aqual, afresh
	Brand attribute Assoc.	fsilver fdenny fwool qsilver qdenny qwool esilver edenny ewool csilver cdenny cwool lsilver ldenny lwool msilver mdenny mwool psilver pdenny pwool		
	Category Beliefs and percept.	'place' to 'extraord' (Ques 18, 1-20) All 20 var included		
	Value Orient.	'Nutrit' to 'response' (Ques.20; 1-35) All 35 Var included		
	Role Percep.	'invite' to 'compli' (Ques.19; 1-30) All 30 var included		

As was noted by the author in section 2.1, discriminant analysis requires interval independent data. The nominal independent variables measuring benefits and product attribute associations were therefore converted to dummy variables in order to perform the discriminant analysis (Refer Table 8.6)

In creating the dummy variables the following measures were grouped into a single category as identified below:

1) Primary benefit sought:

   Dummy variables were created for the five most important benefits sought (ease of use, health, taste, adds something extra, versatility and an 'all other' category. The top five benefits accounted for 84% of respondents.

2) Most important product attribute associated with fresh mushrooms:

   - Dummy variables were created for the 4 top product attribute ratings of freshness, brandname, quality, price and an 'all other' category. The top 4 ratings accounted for 98% of respondents.

3) The following psychographic variables were omitted purposefully from the data analysis:

   - 2nd and 3rd benefit ratings
   - 2nd and 3rd product attribute associations
   - Regional brand attribute associations.

The rationale is as per that detailed in Section 2.1

A copy of the BMDP stepwise discriminant analysis run-stream is found in Appendix E.

Briefly the steps followed were as follows:

At Step O, the largest F to enter is for 'list' so it entered at Step 1. 'Luxury' enters next at Step 2, 'everyday' at Step 3, 'serveg' at Step 4, 'occasion' at Step 5, 'hmarco' at Step 6, 'hmarc' at Step 7, 'budget' at Step 8, 'ill' at Step 9, 'fibre' at Step 10, 'ofts' at Step 11, 'single' at Step 12, 'pursup' at Step 13, 'benease' at Step 14,. A discussion of the findings follows in section 3.2[4]

3.2 Identification of Significant Characteristics Based on the Inclusion of Psychographic Variables

The first step in analyzing the data was to examine the descriptive measures (means and standard deviations) for each of the two groups (Refer Appendix G).

Examining the 'larger differences' between the means gives one the first indication of which variables distinguish between members of the 2 groups. It appears that the heavy user segment are more likely to rate appearance and freshness as being important determinants of purchase, are more likely to pay a premium for the best quality product, are more likely to perceive little difference between the brands, are more likely to have mushrooms on their shopping lists, and are more willing to try new varieties. They are also more likely to view mushrooms as an everyday vegetable and are more likely to serve mushrooms in place of red meat. Heavy users are more likely to be avid lovers of home cooking; specifically they are more likely to have cooking as their major hobby, place greater importance on their cooking, offer advice on cooking, and be creative with their cooking.

Heavy users appear to place greater value on calorie and cholesterol content of food, avoid red meat to a greater extent, and stress the need to include raw product in their diet. Heavy users are more likely to perceive the main benefit in

[4] The author withes to note that in section 3.2 the findings will be presented and compared with those obtained in section 2. The interpretation of the significant distinguishing characteristics will, however, be detailed in section 4 where the two user groups are profiled

mushrooms as their versatility and the fact that they are 'healthy'. Heavy users are more likely to rate freshness as the most important attribute in influencing purchase.

The light users are more likely to purchase the lowest priced mushrooms on the shelf or purchase mushrooms when on special -more likely to favour bulk packs, and purchase more on impulse. Light users are more likely to perceive a higher degree of risk in purchase and consumption of mushrooms. They are also more likely to perceive mushrooms to be a luxury and for use at special occasions only.

Light users are less likely to enjoy cooking and are less confident home cooks - specifically they are more likely to seek advice on cooking, confine themselves to trying only simple new recipes, feel disappointed if their dinner is a flop and judge themselves by the meals they prepare.

Light users are more likely to feel responsible for providing nutritional food for the family, more likely to use a budget when planning and preparing meals and more likely to be economy minded and place greater emphasis on selecting products that offer good value for money. They also appear to be more 'time conscious' - more likely to favour quickly prepared meals and make greater use of microwave and convenience foods.

Light users are more likely to perceive the main benefits in mushroom consumption to be ease of preparation, taste and the fact that they add that 'something extra' to a dish.

Light users are likely to rate price and well known brand name as important product attributes influencing their purchase.

The standard deviations in the two groups are similar except for the variables:

Place	'I would serve mushrooms in place of red meat'
Everyday	'Mushrooms are an everyday vegetable'

Occasion	'Mushrooms are for use at special occasions only'
Quality	'Willing to pay extra for best quality brand on shelf'
Time Cook	'spend most of my free time at home cooking for family and friends'

However, even in the case of the above variables, there were only slight differences in the standard deviations recorded.

Having examined the descriptive data the next step was to assess the contribution of the psychographic variables to the segmentation study. In order to do this the F Matrix, the Discriminant function and the Classification matrix were examined.

(1) F Matrix

The Summary Table 8.7 lists all the non psychographic and psychographic variables that are significant in distinguishing between heavy users and light users of mushrooms.

The significant variables are ranked in order of importance based on their F to enter value.

Table 8.7 Summary Table Discriminant Analysis - Non- Psychographic and Psychographic Variables

STEP NO.	VAR. ENTERED	F VALUE TO ENTER	NO. OF VAR. INCL	U-STATS.	APPROX F. STATS.	DEGREES OF FREEDOM	
1	74 list	57,056	1	0,8752	57,056	1,0	400,0
2	164 luxury	35,125	2	0,8044	48,524	2,0	399,0
3	161 everyday	11,249	3	0,7822	36,930	3,0	398,0
4	280 serveg	9,689	4	0,7636	30,724	4,0	397,0
5	171 occ	8,528	5	0,7475	26,751	5,0	396,0
6	315 hmarco	7,004	6	0,7345	23,798	6,0	395,0
7	317 hmarc	6,548	7	0,7225	21,620	7,0	394,0
8	212 budget	6,777	8	0,7102	20,042	8,0	393,0
9	177 ill	5,443	9	0,7005	18,622	9,0	392,0
10	176 fibre	5,538	10	0,6907	17,507	10,0	391,0
11	319 ofts	5,244	11	0,6816	16,565	11,0	390,0
12	197 simple	4,971	12	0,6730	15,754	12,0	398,0
13	286 pursup	4,945	13	0,6645	15,070	13,0	388,0
14	287 benease	4,183	14	0,6574	14,407	14,0	387,0

Table 8.7 shows that there are 14 variables whose F value is greater than 4. These are the 14 significant variables that are contributing to the classification of and hence differences between heavy users and light users.

A Description on the 14 significant variables is provided in Table 8.8 overleaf:

Table 8.8 Classification and Description of Significant Non Psychographic and Psychographic Variables

VAR. NAME	VAR. TYPE	MEASURE	EXPLANATION OF VARIABLE
List	P	Shopping Behaviour	Mushrooms are always on the shopping list
Luxury	P	Category Belief	Mushrooms are a luxury
Everyday	P	Category Belief	Mushrooms are just an everyday vegetable
Serveg	B	Usage Situation	Most frequently use mushrooms as a vegetable accompaniment.
Occasion	P	Category Belief	Mushrooms are only for use at special occasions or when entertaining only
Hmarco	D	Stage in F.L.C.	Married with older children
Hmarc	D	Stage in F.L.C.	Married with children at home
Budget	P	Value Orientation	I work to a set budget when shopping and planning family meals
Ill	P	Category Belief	Can't take a chance with mushrooms, if they go off they could make you ill
Fibre	P	Category Belief	Mushrooms are high in fibre
Ofts	B	Brand Usage	Brand used most often = Silverstream
Simple	P	Cooking Style	Select only simple recipes from magazines for which one has the ingredients
Pursup	B	Purchase Location	Purchase mushrooms most frequently from the supermarket
Benease	P	Benefit	Primary Benefit - Mushrooms are quick, easy to prepare and use

P = Psychographic D = Demographic B = Behaviour
Variables are ordered based on F to enter values in Table 8.7

Table 8.7 highlights that **9** of the **14** significant variables are Psychographic variables. In addition, the 3 most significant discriminating variables (i.e. those

with the highest F to enter) are all psychographic.

Specifically :

(1) List - a measure of shopping behaviour specific to the category.

(2) Luxury - category belief

(3) Everyday - Category belief

Of the remaining 6 significant psychographic variables, 3 were measures of category beliefs, 1 each were measures of respondents value orientations towards home cooking, role perceptions with respect to home cooking and primary benefits sought from purchasing fresh mushrooms

Five non psychographic variables were found to be significant in distinguishing heavy users from light users, 2 were demographic measures (both refer to stage in the family life cycle) and 3 were behavioural measures. (specifically usage situation, brand usage and purchase location).

The author wishes to draw attention to the fact that when the psychographic variables were added to the discriminant analysis a 'new' behavioural variable emerged as a significant discriminator between the heavy users and the light users. Specifically when only the 12 non psychographic variables were included in the discriminant analysis, 5 variables were found to be significant. When the psychographic variables were added to the analysis, 5 demographic and behavioural variables were still found to be significant; however one had been removed (oftdin) and a new behavioural variable was entered (ofts). The reason for this occurrence is most probably due to inter-correlation between the non psychographic and psychographic variables.

In order to assess how effective the 14 significant psychographic and non psychographic variables were in distinguishing between heavy and light users of mushrooms it was necessary to examine the F Matrix in Figure 8.5

Figure 8.5 The F Matrix

	Heavy Users	Degrees of freedom
Light Users	14,41	14 387

The F Matrix calculates the mean values for heavy users and light users based on the 14 significant variables. It then computes the difference between the 2 means (F Statistic) as a measure of how different the 2 groups of mushroom consumers are. It follows logically that a large significant F Statistic indicates that the 2 groups are significantly different from one another and that the variables are therefore helpful in separating the 2 groups of consumers.

The F Statistic in Figure 8.5 is equal to 14.41 with 14+387 degrees of freedom

This indicates that there is at least some significant difference between the two groups based on the inclusion of non psychographic and psychographic variables in the analysis. In order to assess the contribution of the psychographic variables in distinguishing between heavy users and light users of mushrooms this result must be compared with the F Statistic based only on the inclusion of non psychographic variables. (Refer Section 2.2 Figure 8.3)

Table 8.9 Comparison of the F Statistic

F STATISTIC NON PSYCHOGRAPHIC VARIABLES ONLY	F STATISTIC NON PSYCHOGRAPHIC AND PSYCHOGRAPHIC VARIABLES
8,07 with 5+396 degrees of freedom	14.96 with 13+388 degrees of freedom

From Table 8.9 it is clear that when the psychographic variables were included in the analysis, the F Statistic score rose from 8,07 to 14,96. **Based on the F. Matrix, it appears that the psychographic variables significantly contributed to distinguishing between the two groups of users and helped further separate or differentiate the two groups from one another.**

2) The Discriminant Function

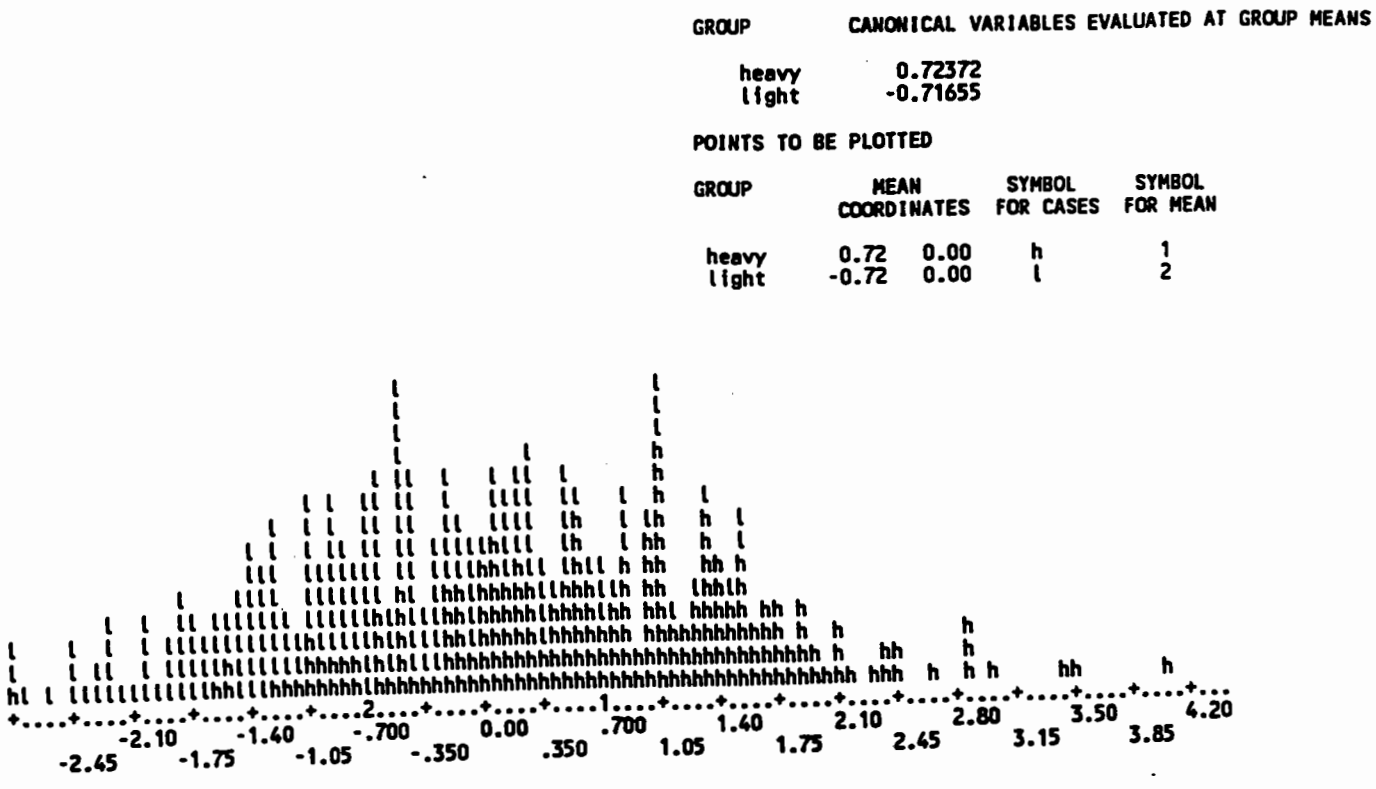
The second measure the author focused on, was the discriminant function. The discriminant function based on the significant demographic, behavioural and psychographic variables reads as follows:

F = 2,34845 + 0,49991(list) + 0,28796(everyday) - 0,38564(luxury) - 0,27704(occasion) - 0,26880(fibre) - 0,24456(ill) - 0,20211(simple) - 0,19621(budget) - 1,00393(ofts) + 0,59484(serveg) - 0,47534(pursup) - 0,43625(benease) + 1,01081(hmarco) + 0,50063(hmarc)

The discriminant function plays 2 roles - it is useful for both classifying respondents into the usage groups and for indicating which significant variables (and to what degree and direction) contribute to the classification.

Firstly the discriminant function shall be examined to evaluate the contribution of the psychographic variables for classifying respondents into either heavy user or light user groups. This required calculating the discriminant function (based on the inclusion of the psychographic variables) for each individual. The results are the canonical variables which are plotted in the Histogram in Figure 8.6 overleaf:

Figure 8.6 Histogram of Canonical Variables (Psychographic Measures Included)



In order to assess the contribution of the psychographic variables to the classification of respondents into the two user groups the author compared the histograms in Figure 8.6 with the histograms based purely on non psychographic variables. (See Section 2.2 Refer to Figure 8.4) This comparison reveals that the two histograms in fig 8.6 are far more clearly defined. Specifically the light users are grouped predominantly to the left and are clearly discernable from the heavy users who are grouped predominantly to the right.

The histograms are therefore further indication that the psychographic variables have helped to identify and classify the respondents into the two usage groups.

The discriminant function also indicates the relative contribution of each variable to the classification of respondents into either the heavy user group or light user group. The significant discriminant coefficients are listed in Table 8.10.

Table 8.10 Discriminant Coefficients for Significant Non Psychographic and Psychographic Variables

Var No.	Variable Name	Variable Type	Coefficients for Canonical Variables
74	List	P	0,49991
161	Everyday	P	0,28796
164	Luxury	P	-0,38564*
171	Occasion	P	-0,27704*
176	fibre	P	-0,26880*
177	Ill	P	-0,24456*
197	Simple	P	-0,20211*
212	Budget	P	-0,19621*
319	Ofts	B	-1,00393*
280	Serveg	B	0,59484
286	Pursup	B	-0,47534*
287	Benease	P	-0,43625*
315	Hmarco	D	1,01081
317	Hmarc	D	0,50003

P = Psychographic
B = Behavioural
D = Demographic

* Denotes that the variable distinguishes a light user

Referring to Table 8.10, 9 variables, of which 7 are psychographic measures, are significant in distinguishing **light users.**

The remaining 5 variables, of which 2 each are demographic and psychographic and one is behavioural, are significant in distinguishing heavy users.

The discriminant coefficients therefore provide further evidence of the contribution of the nine significant psychographic variables in identifying and distinguishing heavy users from light users. These measures shall be further discussed when profiling the segments in section 4.

3) Classification Matrix

A third measure of the contribution of psychographic variables to the segmentation process is to assess the degree of success of the discriminant function.

To assess this, it is necessary to analyze the data in the cross classification matrix and jackknife classification matrix presented in Tables 8.11 and 8.12 below:

Table 8.11 Classification Matrix

GROUP	% CORRECT CLASSIFIED	NO.OF CASES CLASSIFIED INTO GROUP -	
		HEAVY	LIGHT
Heavy	76,0	152	48
Light	77,2	46	156
TOTAL	76,6	198	204

Table 8.12 Jackknife Classification Matrix

GROUP	% CORRECTLY CLASSIFIED	NO. OF CASES CLASSIFIED INTO GROUP -	
		HEAVY	LIGHT
Heavy	73,0	146	54
Light	76,2	48	154
TOTAL	74,6	194	208

Referring to Table 8.11, 154 respondents were correctly classified as heavy users and 157 respondents were correctly classified as light users. The total number of correct predictions based on the significant psychographic, demographics and behavioural variables was therefore 154 + 157 = 311 respondents. Since there were 402 respondents in total 311/402 = 77,4%.

The Jackknife Classification, Table 8.12, reveals that there were 148 correctly predicted heavy users and 151 correctly predicted light users. The total percentage correctly classified based on the 14 variables is 74,4%. This is a measure of the effectiveness of the 14 significant psychographic and non psychographic variables in predicting whether respondents were heavy users or light users .

In order to assess the contribution of the psychographic variables to the classification of respondents as either heavy user or light users it is necessary to compare the results in Table 8.12 with those obtain in Phase 1 of the discriminant analysis (Refer to Section 2.2 Table 8.5)[5]

The total percentage correctly classified based on the significant demographic and behavioural variables only was equal to 49,3%.

[5] The jackknife classification is the more reliable measure as it removes upward bias and will therefore be used as the basis for comparison.

Specifically, 46% of respondents were correctly classified as heavy users and 52% were correctly classified as light users.

The total percentage correctly classified based on the inclusion of the psychographic measures increased to 74,6%. Specifically 74% of respondents were correctly classified as heavy users and 75% of respondents were correctly classified as light users. Comparing the two tables, the total percentage of explained variance rose by 51,3% with the inclusion of the psychographic measures.

3.3 Summary

Section 3 detailed the findings of the second phase of the discriminant analysis. The results showed that 14 variables were found to be significant in distinguishing between heavy users and light users of fresh mushrooms.

Of the 14 significant variables, 9 were psychographic measures versus only 5 non psychographic measures. In addition, the 3 most significant measures that distinguished between heavy users and light users of fresh mushrooms were all psychographic measures.

Three measures were employed by the author to assess the contribution of the psychographic measures. These were the F.Matrix, the discriminant function and the jackknife classification matrix. All 3 measures revealed that the psychographic variables had contributed significantly to identifying and distinguishing between the heavy users and the light users of fresh mushrooms.

In the following section of this Chapter, the author will assess the contribution of the significant psychographic variables (identified in phase II of the discriminant analyses) to the profiling and describing of the two user groups.

4. Profiling of the Segments

The objective of this Section is to assess the descriptive role of the significant psychographic variables (identified in the discriminant analyses) in the profiling of the two user groups.

In Chapter 3 the author highlighted that in the second step of the market segmentation process, segments should be profiled on their distinguishing characteristics. The author wishes to draw attention to the fact that it is only those variables that were found to significantly differentiate between the groups that should be used in the profiling process. Kottler comments as follows:

> 'Each cluster must now be profiled in terms of it **DISTINGUISHING** attitudes, behaviour, demographic, psychographic and media consumption habits' (Kottler, 1988 p 279-280).

In addition it was highlighted in Chapter 3 that the discriptor variables must be correlated to the segmentation basis variable - in this case volume of use. The procedure of discriminant analysis ensures that this criteria was met (Refer Chapter 7, Part II) Cravens comments as follows.

> 'The objective of profiling segments is to identify the characteristics that are highly correlated to the segmentation basis variable'(Cravens, 1991).

These characteristics then by definition become the significant descriptors of the market segments.

In this section, the author will:

> Profile the two groups of respondents i.e. the heavy users and the light users on their significant distinguishing characteristics. In order to assess the contribution of the psychographic variables to this process it will be divided into two stages. In the first stage the author will profile the segments only on the five significant demographic and behavioural variables

established in phase 1 of the discriminant analysis. In the second stage the author will profile the segments on all 14 significant psychographic, demographic and behavioural variables established in phase 2 of the discriminant analysis and then comment critically on the contribution of the psychographic variables to the resulting segment profiles.

4.1 Profiling of Market Segments Based on Significant Non Psychographic Variables only

In order to profile the 2 user groups on the 5 significant demographic and behavioural variables a simple cross-tabulation analysis was performed. The results are presented in Tables 32-35 in appendix H. A summary analysis is presented in Table 8.13.

Table 8.13 Summary Analysis - Non Psychographic Variables

VARIABLE TYPE	MEASURE	VARIABLE NAME	HEAVY USERS	LIGHT USERS
Demo-graphic	Family Life Cycle	Hmarco Hmarc	(76,5%) of H.U. are married with children either at home or grown up	60% of L.U. are married with children. There are comparatively higher % of L.U. who are single/widow or married with no children
Behaviour	Usage Situation.	Serveg	30% of H.U. use mushrooms most frequently as a vegetable. A further 17% cited salads and 10% cited stews, as the most frequent usage application.	L.U. most frequently used mushrooms for stews (17%) and salads(16%). Veg. accomp. was rated by only 15% (half that of H.U.
	Usage Occasion	Oftdin	75% of H.U. use mushrooms mainly at family dinner	all... 63% of L.U. would also serve mushrooms most frequently at family dinner but a higher % of L.U.'s would reserve their use primarily for entertaining
	Purchase location	pursup	H.U.most frequently purchase at supermarkets (74%) and greengrocers (26%)	L.U. purchase almost exclusively at supermarkets (84%). Only 15% would purchase mushrooms at greengrocer or cafe.

(The following abbreviations are used in this table: Heavy Users = H.U.; Light Users = L.U.; Veg = Vegetable; freq.= frequent; % = percentage)

Referring to Table 8.13 the author has drawn the following profiles of the two user groups based on the significant non psychographic variables only.

4.1.1 Profile of Heavy Users Based on Non Psychographic Variables

Heavy users are predominantly married with children. Heavy users use mushrooms most frequently as a plain vegetable accompaniment to meat etc (as they would use other vegetables such as peas, carrots etc.) Salads are also a popular usage application. Heavy users consume mushrooms mainly at their family dinners. In the authors opinion, family dinners are probably a regular occurrence based on their stage in the family life cycle. Heavy users purchase mushrooms mainly at supermarkets and greengrocers.

4.1.2 Profile of Light Users Based on Non Psychographic Variables

60% of light users are married with a family but a further 40% do not fall into the typical 'middle stage' of the family life cycle. Specifically there are more single people and young married couples in the light user group.

Light users primarily use mushrooms in casseroles and salads. While 63% of light users most frequently serve mushrooms at family dinners, the remainder (37%) would reserve their use for entertaining/braai's etc. The author hypothesizes that there could be a connection between this and the stage in family life cycle. Specifically, since a higher proportion of light users are single/no family they may not prepare as many 'traditional family dinners of meat and vegetables' and therefore have more cause to use mushrooms when entertaining.

Purchase is confined amongst light users almost exclusively to supermarkets.

4.1.3 Summary - Non Psychographic Profile

From Section 4.1.1 and 4.1.2 the author was only able to draw a limited profile of the 2 segments based on the 5 significant demographic and behavioural variables. The author was able to comment on the groups in

terms of purchase location, usage occasion and situation and in terms of stages in the family life cycle. The questions that immediately raise themselves are: Is such information sufficient on which to base a marketing strategy? Could the psychographic variables contribute to a more descriptive and useful profile of the respondents in the segmentation study. If the answer is yes, then this justifies their inclusion in a segmenting strategy. The author will assess this in the next section (4.2).

4.2 Profiling of Market Segments Based on the Inclusion of the Significant Psychographic Variables

The nine significant psychographic variables were cross tabulated with the grouping variable usage. The results are presented in Tables 36-45 in Appendix H. A summary analysis is presented in Table 8.14.

Table 8.14 Summary Analysis - Psychographic Variables

VARIABLE TYPE	MEASURE	VARIABLE NAME	HEAVY USERS	LIGHT USERS
Psycho-graphic	Shopping behaviour	List	66% of H.U.always have mushrooms on their shopping list	Only 32% of L.U. stated that they had mushrooms on their shopping list
	Category Belief	Every-day	40% of H.U. would classify mushrooms as an everyday vegetable	In contrast, almost twice as many L.U. (79%) would not classify mushrooms as an everyday vegetable
	Category Belief	Luxury	A minority of H.U. (27%) perceive mushrooms to be a luxury	58% of L.U.(more than double that of H.U.) perceive mushrooms to be a luxury
	Category Belief	Occasion	Almost all H.U. (95%) disagreed with the belief that mushrooms should only be used at special occasions	19% of L.U. would reserve the use of mushrooms for when entertaining only
	Category Belief	Ill	55% of H.U. still perceive a certain risk, but less so than the L.U.	68% of L.U. still perceive a certain risk in the use & consumption of mushrooms
	Category Belief	Fibre	36% of H.U. thought mushrooms high in fibre	43% of L.U. perceive mushrooms to be high in fibre
	Value Orien-tation	Budget	Only 46% of H.U. consciously budget when food shopping and play	63% of L.U. work to a set budget when planning and shopping for food
	Role Percep-tion	Simple	Only 45% of heavy users would be conservative in their choice of a recipe	59% of L.U. are conservative in their choice of new recipes.
	Benefit	Benease	22% of H.U. rated 'healthy' aspects of fresh mushrooms as primary benefit for using the product.	24% of L.U. perceive primary benefit in use of mushrooms to be ease of use and preparation.
Behavioural	Brand Usage	Ofts	69% of H.U. purchase the Denny brand most often. A further 7,5% use Woolworths most frequently	While only a small % of the TOTAL sample used the brand Silverstream most often, these respondents were mainly in the Light user category. Specifically 6,4% of L.U. vs only 2,5% of H.U. claimed to use Silverstream most often. The majority of L.U. do however use the brand Denny (71%)

(The following abbreviations are used in this table: Heavy Users = H.U.; Light Users = L.U.; Veg = Vegetable; freq.= frequent; % = Percentage)

Combining the psychographic, demographic and behavioural variables together the following is the resultant descriptive profile of each segment.

4.2.1 Profile of Heavy Users based on the Inclusion of Psychographic Variables

In the author's opinion, heavy users have come to regard mushrooms as more of an 'everyday' necessity and an ordinary vegetable. Mushrooms have become categorized in their minds like other vegetables such as carrots/beans/peas etc. The author bases this conclusion on the first and third strongest discriminating variables. The variable 'list' which established that the majority of heavy users always have mushrooms on their shopping list implying that they perceive it to now be a part of their regular planned purchases.

The third strongest discriminating variable 'everyday' established that the majority of heavy users perceive mushrooms to be just an ordinary vegetable.

Supporting the above finding, heavy users are most likely to eat mushrooms on their own. Specifically heavy users serve mushrooms most frequently as a vegetable accompaniment. In the author's opinion this implies that they can afford to do so as mushrooms are an expensive vegetable per kilogram versus other typical vegetable accompaniments.

The fact that mushrooms are healthy is seen as a primary benefit by heavy users. In the authors's opinion, this could imply that heavy users rate healthy cooking styles as important. This also implies that they have knowledge of the healthy attributes of the product itself.
17% of heavy users also serve mushrooms most frequently in a salad. This implies that they often use the product raw in a 'healthy' application.

Majority of users in this category fall into the traditional 'middle stage' of the family life cycle.

4.2.2 Profile of Light Users based on the Inclusion of Psychographic Variables

The light user segment do not perceive mushrooms to be an ordinary vegetable. The majority of these consumers believe that mushrooms are a **luxury**. Mushrooms are therefore seen as a non necessity by the majority of light users. This is borne out by the second strongest discriminating variable 'luxury'. Mushrooms are therefore perceived by light users to be more of a 'delicacy/or treat'. They certainly do not perceive mushrooms to fall into the category of an everyday vegetable nor would mushrooms always be on their shopping lists.

In line with the above finding, 19 % of light users would mainly use mushrooms when entertaining or when preparing a special meal for a specific occasion. One may deduce that these light users have the perception that mushrooms are too expensive for everyday use and since they are a non-necessity their usage should be confined to only special times when the spending on a luxury product can be justified.

A value orientation that specifically distinguishes light users from heavy users revealed that light users were more likely to **budget** when planning and preparing family meals. Light users are more likely to take cognisance of the costs of foodstuffs when selecting food. This finding is reinforced by a significant difference in light users' perception with respect to recipe selection. Light users in their selection of new recipes, are more likely to try only simple ones for which they have the ingredients. One may deduce from this that light users are less willing to try the more exotic 'fancy' recipes perhaps because of confidence but more likely because it involves especially purchasing new ingredients which cost money. Again the cost/price factor comes into play.

Ease of use and quick preparation are cited as the primary benefits of cooking with fresh mushrooms by light users. In the authors opinion this may be because the light user is subject to time constraints and therefore

values the convenience of the products. What one can however definitely conclude is that light users do perceive mushrooms to be a convenient product and they attach importance to this fact.

22% of light users also rated taste as an important benefit. Closely allied to this, a further 20% of light users stated that a primary benefit of cooking with mushrooms was that, by their addition, it turned what would be an ordinary dish into something extra special. This again reinforces the earlier findings that light users do perceive mushrooms as 'something special' - A product that by its inclusion enhances the image and taste of the recipe.

Light users serve mushrooms most frequently in stews and salads. Specifically, light users add mushrooms to a recipe rather than consume them alone. Again, this reinforces four earlier conclusions that the author made:

1) Firstly, since light users perceive mushrooms to be a luxury it is unlikely they would eat mushrooms 'alone' because of the cost per kilogram factor, but also because, by adding them to a recipe, it extends their use.

2) Secondly, light users do not perceive mushrooms as an ordinary vegetable and therefore are unlikely to serve it as an ordinary vegetable accompaniment.

3) Thirdly, by adding the mushrooms to the recipe, they perceive that it makes the end result 'extra special' because of the 'special nature' of a mushroom.

4) Fourthly, stews are a particularly popular application for light users and again this implies that budget/economy are important factors in influencing the types of meals prepared. Stews are known to be more 'cost efficient' and 'go further' than a typical meat and

vegetable dinner and therefore reinforces the fact that light users are influenced by these factors.

While the majority of light users would most frequently purchase the brand leader there is an indication that certain light users would also purchase Silverstream as their regular brand. Since Silverstream is priced at a discount to Denny and is a relatively well known brand (67% aided awareness) it, in the author's opinion, implies two things:

1) Price could be an important factor in influencing brand selection amongst light users. This is likely since they are aware of budgets/cost factors in food planning.
2) Brand selection would be confined however,to recognised trade names but not necessarily the brand leader.

Light users perceive a greater degree of risk in the purchase and consumption of fresh mushrooms. Specifically they are more likely to fear that mushrooms could make them ill and therefore they are more likely to treat the selection, use and storage of mushrooms with a greater degree of caution. Similarly, light users are more likely to perceive mushrooms as being high in fibre. In Chapter 8 part I it was shown that a high correlation between perceived fibre content and perceived risk in mushroom consumption exists. This reinforces the finding that light users are more likely to perceive risk with the use of fresh mushrooms.

Light users predominantly confine their purchase of mushrooms to supermarkets. Again this is most likely due to:

1) A higher degree of risk perceived in purchase of fresh mushrooms by light users and therefore they confine their purchase to those outlets where only well know brands are stocked.
2) Since price/cost is a key factor influencing their habits with regards to food and cooking, they are likely to purchase at

supermarkets since the prices are relatively cheaper than cafes or greengrocers.

4.3 Summary - Profiles of the Segments

The author in Section 4 has profiled the two user groups on their distinguishing characteristics identified through discriminant analysis detailed in Section 2 and 3 of this chapter.

This was done in two separate stages in order to assess the contribution of the psychographic variables to the profiling process.

In the first stage the non psychographic variables highlighted that heavy users were more likely to be in the traditional 'middle stages' of their family life cycle. Heavy users were most likely to use mushrooms as a vegetable and serve mushrooms at family dinners. The light users in contrast tended to serve mushrooms most frequently in a stew or salad and a higher percentage would reserve the use of mushrooms for special occasions only. Almost all light users purchased their mushrooms from supermarkets.

The inclusion of the psychographic variables revealed, in addition to the above findings, that most heavy users tended to always have mushrooms on their shopping list, were more likely to perceive mushrooms as an ordinary vegetable and rated the 'health' benefits as one of the most important reasons for consuming fresh mushrooms. The significant psychographic variables also revealed that light users differed from heavy users in terms of two general measures related to home cooking. Specifically light users were more concerned with costs and budgeting when preparing family meals and light users were more likely to be conservative in their approach to selecting recipes. Reinforcing this finding, light users predominantly perceived mushrooms to be a luxury and were therefore more likely to reserve their use for special occasions only. Light users also perceived a higher degree of risk in their purchase and use of fresh mushrooms. The primary benefit that they sought from the use of fresh mushrooms was their convenience.

Based on the findings presented in sections 2,3 and 4 the author, in the following chapter, will draw conclusions as to the contribution of the psychographic variables in the profiling stage of a segmentation study.

Before however proceeding to the next chapter the author shall address the reliability and validity issues that pertain to this study.

5. Reliability and Validity of the Study

Chapter 6 revealed that psychographic segmentation studies are often criticised on issues pertaining to reliability and validity.

The literature revealed that the majority of criticisms levelled at psychographics. pertained to:

1) The use of general psychographic statements that were not related in any way to the product under study. (For example, general personality traits)
2) The use of psychographic variables as basis variables on which to segment the market. In particular there has been much criticism levelled at the use of cluster analysis for this purpose.
3) The lack of any specific hypotheses to guide the selection of psychographic variables for inclusion in a segmentation study.

The author in this section shall address steps that were taken to address the issues of reliability and validity as they pertain to this study. It should however be noted that the roles played by the psychographic variables in this segmentation study were as descriptor variables. The segments were therefore not based on psychographic measures. Issues therefore with respect to reliability and validity that relate to point two above will not be addressed by the author as they do not pertain to this study.

5.1 Reliability

Reliable measures are those that are consistent i.e. they are stable from one administration to the next. (Dillon et al, 1990 p 369)

The literature reveals that there are a number of alternative approaches for assessing reliability. For example - Test Retest Reliability methods, Split-Halves, Cronbach's Alpha, Item to total correlations etc. Each of these tests however have certain limitations. (Bohrnstedt, 1970 p 85; Nunnally, 1978)

The reliability of psychographic measures selected for this study has been assessed by the author by examining the results of:

1) Factor Analysis; 2) Discriminant Analysis.

1) Factor Analysis was conducted on three sets of items pertaining to (1) category beliefs (2) value orientations and (3) role perceptions.
The results of the factor analysis detailed in Chapter 8, part I and Appendix C provided some evidence of the internal consistency and reliability of the measures selected. The factor scores to an extent also validated the author's hypothesized underlying constructs for each of these measures.

BMDP Factor Analysis also provides a measure of internal consistency termed Carmines Theta. Carmines Theta is a special case of Cronbach's Alpha. It is a measure of internal consistency ranging from 0 to 1,0 (Carmines et al, 1979). The measure obtained for Carmines Theta for each of the factor analyses provided further evidences of the reliability of the psychographic measurement instrument developed by the author specifically for this study.

2) Discriminant Analysis

The market segments for this study were based on respondents volume of use of fresh mushrooms. The author performed discriminant analysis and fourteen variables were found to be significant in distinguishing between the two segments, heavy users and light users. Based on these fourteen variables, 73% of heavy users and 70% of light users would be correctly classified back into their respective market segments. This conclusion was based on the Jackknife Classification Matrix (Refer Section 3). The issue of the reliability of the market segments has therefore also been addressed through the discriminant analysis procedure.

5.2 Validity

Validity refers to the extent to which differences in the observed scale scores reflect true differences in the characteristic or construct being measured. Simply put -validity refers to whether the psychographic instrument measures accurately what it was intended to measure. Taking into account the criticisms raised in Chapter 6, the author adopted the following approach in order to select valid measures for the psychographic instrument.

Based on an extensive literature review, a conceptual and operational definition of psychographics was adopted for this thesis. Based on this the author developed a hypothetical model to guide the selection of psychographic measures to include in the study (Refer Chapter 4, fig 4.1).

The author also placed much emphasis on the exploratory phase in order to ensure the comprehensive generation and selection of valid psychographic measures (Refer Chapter 7, part II).

The selection of psychographic measures for this study was therefore not haphazard but rather followed a specific procedure guided by the definition and hypothetical model. All statements finally included were hypothesized by the author to be relevant to the problem under study.

SUMMARY

In Chapter 8, part II, the author segmented the fresh mushroom market on the basis of volume of use. Two market segments almost of equal size were identified: A group of heavy users and a group of light users of fresh mushrooms.

The author established that there where five significant non psychographic variables that distinguished between these two groups. These five variables accounted for 49% of the explained variance in the behaviour of the two groups with respect to their consumption of fresh mushrooms. Of the five significant variables two were demographic measures and three were behavioural measures.

The addition of the psychographic variables to the analysis increased explained variance to 74%. Specifically nine psychographic variables were found to be significant in distinguishing between heavy users and light users of fresh mushrooms.

The profiles of the two user groups were compared, first only on their distinguishing non psychographic characteristics and then on all the significant variables including the psychographic measures.

In the final Chapter of this thesis, the author will draw conclusions based on the findings of the research.

CHAPTER NINE
CONCLUSIONS AND RECOMMENDATIONS

INTRODUCTION

The final chapter addresses the conclusions and recommendations drawn by the author based on the findings of the empirical research.

In Section 1 the author presents a summary of the findings. The results of the main and sub-hypotheses tested are reported in section 2. In section 3, the author evaluates the effectiveness of the segmentation study on the three criteria identified in Chapter 3 of the literature review. Based on the findings of the empirical research, the author draws conclusions and recommendations for the inclusion of psychographic variables in a segmentation study in section 4. In section 5, strategic implications for Tongaat Mushrooms, arising from the segmentation analysis are detailed. Finally, in section 6, directions for future research are proposed.

1. Summary of the Findings

A summary of the results of the data analysis are presented in Tables 9.1 - 9.4

Table 9.1 Summary of Significant Variables that Distinguished between Heavy Users and Light Users of fresh mushrooms.

Step No.	F. to Enter	Variable Name	Classification	Measure
1	57,056	List	Psychographic	Buying Style
2	35.125	Luxury	Psychographic	Category Relief
3	11,249	Everyday	Psychographic	Category Relief
4	9,689	Serveg	Behavioural	Usage Situation
5	8,528	Occasion	Psychographic	Category Belief
6	7,004	Hmarco	Demographic	Stage in F.L.C.
7	6,548	Hmarc	Demographic	Stage in F.L.C.
8	6,777	Budget	Psychographic	Value Orientation
9	5,443	Ill	Psychographic	Category Belief
10	5,538	Fibre	Psychographic	Category Belief
11	5,244	Ofts	Behavioural	Brand Usage
12	4,971	Simple	Psychographic	Role Perception
13	4,945	Pursup	Behavioural	Purchase Location
14	4,183	Benease	Psychographic	Benefit

Table 9.2 Results of Phase I - Discriminant Analysis

Summary of Significant Non-Psychographic Variables

Classification	Type of Measure	Variable Name(s)	No.of Variables
Demographic	Stage in F.L.C.	Hmarco/Hmarc	2
Behavioural	Usage Situation	Serveg	1- ⎫
	Brand Usage	Ofts	1- ⎬ 3
	Purchase Location	Pursup	1- ⎭
TOTAL			5

Table 9.3 Results of Phase II of the Discriminant Analysis

Summary of Significant Psychographic Variables

Types of Psychographic Measures	Degree of* Specificity	Variable Names(s)	Number of Variables
1. Value Orientation	G	Budget	1
2. Role Perception	G	Simple	1
3. Benefit	P	Benease	1
4. Category Belief	P	Luxury, Everyday,Ill, Fibre, Occasion	5
5. Product Attributes/Brand Preference	P	-	0
6. Buying Style	P	List	1

*Degree of specificity pertains to whether the measure is General (G) or Product Specific (P)

Table 9.4 Summary Classification* of Heavy Users and Light Users of Mushrooms

	Percentage of Users Correctly Classified		% Increase/ Decrease in Explained Variance
	Non Psychographic	Psychographic and Non Psychographic Variables	
Heavy Users	46,0%	73,0%	58,7%
Light Users	52,5%	76,2%	45,1%
TOTAL	49,3%	74.6%	51.3%

* Jackknife

2. Results of the Research

In Chapter 7, Part I, the author outlined the main and sub-hypotheses to be tested in this thesis. Based on the findings of the empirical research, the author will report in this section of the acceptance or rejection of the hypotheses.

2.1 Main Hypothesis

The main hypothesis to be tested in this thesis was as follows:
Psychographic measures will yield significant descriptor variables in the profiling stage of a market segmentation study that are **useful** for identifying and describing heavy users versus light users of fresh mushrooms.

The literature revealed that undertaking a market segmentation analysis required 2 separate steps to be implemented (Refer Chapter 2 and 3). In the first step the fresh mushroom market was segmented on the basis of volume of use into a group of heavy users and a group of light users.

In the second step, the two user groups were profiled on their distinguishing characteristics. In order to assess the contribution of the psychographic measures as "descriptor variables" the author employed discriminant analysis in two phases. In phase I only, non-psychographic variables were included. Results revealed that 5 variables (3 demographic and 2 behavioural) were significant in distinguishing

heavy users from light users. In phase II (refer Table 9.2), both psychographic and non-psychographic variables were included. Results revealed a further 9 psychographic variables were significant in distinguishing heavy users from light users (Refer Table 9.1 - 9.3).

A comparison of the two stages of empirical research reveals that the psychographic measures contributed significantly to the identification and classification of both heavy users and light users of fresh mushrooms as follows:

- Tables 9.1 - 9.3 reveal that there are 14 variables in TOTAL that are significant in distinguishing between heavy users and light users of mushrooms. Of the 14 variables, 9 (64%) are psychographic and 5 (36%) non-psychographic. Table 9.1 also reveals that the 3 most significant variables (based on their F to enter values) are all psychographic variables.

- The inclusion of the psychographic variables increased the percentage correctly identified heavy users from 46% to 73% and that of light users from 52,5% to 76,2% (refer Table 9.4). The TOTAL percentage correctly classified respondents rose to 75% (refer Table 9.4).

- The 5 non-psychographic variables were only able to distinguish between the heavy users and light users in terms of stage in family life cycle, most preferred product usage application, most preferred product usage occasion and usual purchase location.

  The 9 psychographic variables were, in addition, able to distinguish between the heavy users and light users as follows:

  * 5 Different beliefs with respect to the product category of fresh mushrooms were identified between light users and heavy users. These different perceptions related to risk, price/value, usage applications and usage occasions

* Light users differed from heavy users on the primary benefit sought from fresh mushrooms. Specifically, convenience and ease of use was the primary benefit sought by light users

* Heavy users had a different 'buying style' for fresh mushrooms - specifically it was usually a planned purchase and therefore included on the shopping list.

* Light users differed from heavy users in terms of two general orientations towards home cooking. Specifically, they placed greater emphasis on budgeting and were more 'simple' in their approach to recipe selection.

These results confirm that the psychographic variables provided useful information for describing the two market segments on their distinguishing characteristics.

Based on the empirical findings of the research, the author recommends that the main hypothesis of this thesis be supported as the psychographic variables contributed both to the identification and therefore classification of heavy users and light users of mushrooms and to the description of the resultant market segments.

2.2 Sub-Hypotheses

The author attempted to test 7 sub-hypotheses in this study.

H_1 **Psychographic variables in conjunction with geographic, demographic and behavioural variables will result in better prediction and description of users of fresh mushrooms than geographic, demographic and behavioural variables alone.**

The results presented in Table 9.4 reveal that the addition of the psychographic variables to the segmentation analysis increased the total percentage correctly

classified respondents by 51.3% to equal 74.6%.

Specifically the percentage correctly classified heavy users when based on non-psychographic measures only was equal to 46%. This result improved to 73% on the inclusion of the psychographic measures. The percentage correctly classified light users when based on non-psychographic measures only was equal to 54.5%. This figure rose to 76.2% on the inclusion of the psychographic variables. The psychographic variables in addition yielded 9 additional measures to the demographic and behavioural measures that were useful in the profiling of the two segments. Based on these findings, the author recommends that H_i be accepted.

H_{ii} **The majority of variation in the volume of consumption of fresh mushrooms is unaccounted for by the inclusion of geographic, demographic and behavioural variables only in the segmentation study.**

Table 9.4 reveals that the five significant demographic and behavioural variables were able to classify 46% of heavy users and 52,5% of light users correctly. Overall the non-psychographic variables only accounted for 49,3% of the explained variance in behaviour with respect to volume of consumption of fresh mushrooms.

The author therefore concludes that hypothesis (ii) may be supported because the demographic, geographic and behavioural variables accounted for less than 50% of the explained variance in behaviour of consumers with respect to their volume of consumption of fresh mushrooms.

H_{iii} **Psychographic variables do account for differences in volume of consumption of fresh mushrooms not accounted for by demographic, geographic and behavioural variables.**

The addition of the psychographic variables to the discriminant analysis revealed that 9 psychographic variables were significant in distinguishing between heavy

users and light users of fresh mushrooms. (Refer Table 9.1).

The results in Table 9.4 indicates that with the inclusion of the psychographic variables the TOTAL percentage of heavy users correctly classified rose by 58,7% and that of light users by 45,1%. This indicates that the 9 significant psychographic variables did account for differences in consumption behaviour with respect to fresh mushrooms that could not be accounted for by the demographic and behavioural variables. Specifically, the psychographic variables increased the TOTAL percentage of correctly classified heavy users and light users of fresh mushrooms by 51,3%

The author therefore concludes that hypothesis (iii) may be supported as the psychographic variables did account for differences in behaviour with respect to the volume of consumption of fresh mushrooms not accounted for by demographic, geographic and behavioural variables.

H_{iv} **The addition of the psychographic variables to the analysis will increase the TOTAL explained variance significantly.**

Table 9.4 reveals that, based on the addition of the psychographic variables to the discriminant analysis, the percentage of heavy users correctly classified = 73% and that of light users = 76,2%. The total percentage of respondents correctly classified was equal to 74,6% . This indicated that together the significant psychographic, demographic and behavioural variables accounted for 75% of the explained variance in behaviour between heavy users and light users with respect to fresh mushrooms and therefore only 25% remained unexplained.

The author therefore concludes that H_{iv} may be supported as the addition of the psychographic variables to the segmentation study increased the total explained variance to 75%.

H_v **Both general and product specific measures will yield variables that are significant in distinguishing heavy users of mushrooms from light users.**

Table 9.2 reveals 9 psychographic variables that were significant in distinguishing between heavy users and light users of fresh mushrooms.

Furthermore, of the 9 significant variables, 7 were product specific: category beliefs (5), benefits (1) and buying styles (1). The remaining 2 were general measures, one each referred to value orientations and role perceptions as related to home cooking.

Based on these findings, the author concludes that hypothesis (v) may be supported as both general and product specific psychographic measures were found to be significant in distinguishing between heavy users and light users of fresh mushrooms.

H_{vi} **Those measures that are product specific will provide the significant variables that are most useful in distinguishing heavy users from light users of mushrooms.**

Table 9.1 reveals that the 3 most significant variables that distinguish between heavy users and light users were all product specific psychographic measures.

Specifically, the 2 general measures were entered at Step 8 (value orientations, F to enter = 6,777) and at step 12 (role perceptions, F to enter = 4,971). The product specific measures were entered at steps 1,2,3,5,9,10,14.

Based on the finding for this study, the author concludes that hypothesis (v) may be supported both because of the number of product specific psychographic variables and their statistical significance.

H_{vii} **Of the total number of psychographic statements employed in the study, more than 10% will prove to be significant in distinguishing between heavy users and light users of mushrooms.**

A total of 123 psychographic variables were included in phase II of the discriminant analysis. Table 9.3 reveals that in total, only 9 psychographic variables were found to be significant in distinguishing heavy users from light users of fresh mushrooms. This equates to only 7.3% of the TOTAL number of psychographic variables employed in the analysis.

Based on this finding the author concludes that hypothesis (vii) should be rejected since less than 10% of the TOTAL number of psychographic variables included in the study were found to be significant.

3. An Evaluation of the Effectiveness of the Market Segmentation Study

In Chapter Three, Section 2, the requirements for an effective segmentation study were detailed. The literature revealed that a successful segmentation scheme would result in customer groupings that:

1) Would behave differently from one another
2) Could be identified
3) Would be responsive to an efficient marketing mix aimed at them
4) Would be of substantial size

1) Behavioural Differences

The author detailed in Chapter 3, Section 4.3.2 that by definition the segmenting of the market into heavy and light users results in between segment differences in average household purchasing rates. It was concluded therefore that segmenting a market on the basis of volume of use guarantees the "behavioural criterion" for a market segment is met.

Supporting the above argument, the literature revealed that the opportunity for segmentation exists when buyers needs and wants are different. The fresh mushroom market has been segmented into heavy users and light users based on their different 'demand levels' for the volume of the product consumed. It is this variability in demand across the consumers in the fresh mushroom market that has therefore created the segments and in so doing satisfied criteria (1).

2) Identification of Segments

The objective of profiling market segments is to identify descriptive characteristics that are highly correlated to the basis variable. The technique of discriminant analysis ensures that this requirement is satisfied.

The results of the discriminant analysis employed by the author revealed that 14 variables were significant in identifying and distinguishing between

heavy users and light users of fresh mushrooms. (Refer Table 9.1). These 14 variables were able to correctly classify 73% of heavy users and 76% of light users. (Refer Table 9.4).

The 14 significant variables enabled the author to describe the segments on their distinguishing demographic profiles (specifically stages in family life cycle), behavioural patterns (with respect to usage applications and purchase locations), category beliefs, benefits sought, buying-habits (with respect to fresh mushrooms) and general home cooking values and role perceptions.

The author therefore concludes that the heavy users and light users were able to be identified and described by 14 significant descriptor variables and that criterion two was therefore satisfied.

3) Response Differences

The author stated in Chapter 3, section 2 that the presence of "real" market segments requires consumers in the segments to exhibit actual response differences to a marketing mix that is specifically tailored to their needs.

In order to satisfy this criterion for this study, light users must respond differently to heavy users of fresh mushrooms with respect to a specific marketing mix that is aimed at them.

The author acknowledges that to satisfy this criterion, testing for response elasticities to the various marketing mix strategies would be a necessity. This is however beyond the scope of this study.

In the author's opinion, however, the 14 distinguishing characteristics between heavy users and light users of mushrooms provides a good indication that these market segments would react differently to different elements of the marketing mix.

For example, the majority of light users are far more budget/cost conscious when selecting and preparing food and the majority perceive mushrooms to be a luxury and not a planned purchase (refer Chapter 8, part II). It is the author's opinion that these consumers would more likely respond to price based in-store promotions, encouraging impulse purchasing when the product is perceived to be on 'special'. Such a strategy may well increase the volume of mushrooms purchased by light users. In the author's opinion is it unlikely that heavy users will significantly increase their purchases as they already perceive mushrooms to be a planned regular purchase. A strategy aimed at increasing usage amongst heavy users might rather focus on the 'healthy' aspect of fresh mushrooms (primary benefit sought). This is unlikely to stimulate consumption amongst light users as they seek different primary benefits and are motivated by different factors in making the product choice.

The author therefore concludes that based on the 2 groups distinguishing characteristics it is likely that they would respond differently to different marketing strategy's aimed at each segment. The author, however, acknowledges that this is not proven.

4) The author selected a representative sample of current mushroom users (Refer Chapter 7 Part II). Based on this sample, 50% of current users were identified as light users and 50% as heavy users of fresh mushrooms. Based on this finding, the author concludes that each of these segments could be of sufficient size to be a potential target market and therefore that the forth criterion is satisfied.

In summary, three of the four criterion for an effective segmentation scheme have been satisfied by this study. In addition, there is evidence to suggest that the 3rd criterion would also be satisfied. In assessing criteria 2 and 3, it is the authors opinion that the psychographic variables have contributed significantly to the identification, description and likely response behaviour of the different segments.

4. Conclusions and Recommendations

4.1 Conclusions and Recommendations on the Inclusion of Psychographic Variables in a Segmentation Study.

The literature review (Chapters 4-6) revealed that there was a lack of consensus to the potential usefulness of including psychographic measures in a segmentation study.

Furthermore, the author highlighted that there were divided opinions on the role that psychographic measures could or should play in the segmentation process. Supporters of psychographic research argued for the inclusion of psychographic measures as basis and/or descriptor variables. Other schools of thought, though still supporting the inclusion of psychographic measures, preferred to confine the role of the psychographic measures to a descriptive one only.

The detractors of psychographic research claimed that psychographic measures were of little or no use in a segmentation study. These researchers argued that psychographic measures were too expensive, a waste of time, usually unrelated to the problem at hand and often produced results that were misleading or redundant.

In this thesis the author has attempted to assess the contribution of psychographic measures to a segmentation study. The author has however only assessed their contribution as potential descriptor variables in the profiling of market segments.

In the empirical research phase a segmentation analysis of the fresh mushroom market was implemented. The market was divided on the basis of volume of use into two segments - a group of heavy users and a group of light users of fresh mushrooms. The contribution of the psychographic variables to identifying and profiling the two resultant segments was then assessed.

The findings of the empirical research revealed that the psychographic measures yielded 9 significant descriptor variables. Specifically these 9 variables were significant in identifying and distinguishing between heavy users and light users of fresh mushrooms. Furthermore the 9 significant psychographic variables provided useful information for profiling the two market segments.

The author does however acknowledge that, of the large number of psychographic measures that were employed in this study, only very few proved to be significant (less than 10%). Marketers may argue on these grounds that psychographic measures are too expensive, a waste of time and do not warrant inclusion in a segmentation study. The author however has shown through the empirical research that, by the inclusion of psychographic measures in a segmentation analysis, the outcome has been enhanced. Specifically the psychographic variables increased the explained variance in behaviour between the segments and yielded variables that were significant in profiling the segment on their distinguishing characteristics.

The author therefore concludes that, by the inclusion of psychographic variables in the segmentation analysis, segment identifiability (where the segments were based on volume of use) has been enhanced. The psychographic variables have as a result contributed significantly to improving the effectiveness of the segmentation study of the fresh mushroom market.

The author therefore recommends that segmentation studies should at least include psychographic measures (hypothesized to be relevant to the product under investigation) as potential descriptor variables.[1]

[1] The author acknowledges that this recommendation is based on the findings of one study only. The author therefore recommends that further segmentation studies employing psychographic measures in other industries should be undertaken to validate this conclusion.

4.2 Conclusions on the Contribution of Psychographic Measures to the Development of a Marketing Strategy for Tongaat Mushrooms

In Chapter 3 Section 7 the author stated that descriptor variables, through identifying and describing the target segments, should facilitate the development and implementation of a marketing strategy aimed at allocating marketing resources to take advantage of the segments uncovered in the first step of the segmentation analysis.

In the authors opinion, the information provided by the psychographic variables has enabled Tongaat Mushrooms to have a greater understanding of their core customers in their existing target markets. Furthermore, the psychographic variables have identified significant differences in the psychological processes of heavy users and light users with respect to fresh mushrooms. In Chapter 5 (Section 2) Plummer was quoted as follows:
' The more you understand about your customers, the more effectively you can target them' (Plummer, 1974).

The author concludes on the evidence of this study that the psychographic variables have provided a greater understanding of consumers in the two market segments and in her opinion, therefore, the psychographic information does provide Tongaat Mushrooms the opportunity to communicate more effectively and efficiently with each segment.

Supporting this conclusion, it is the authors opinion that the psychographic variables, by providing greater insight into the two segments motivational processes with respect to the purchase and use of fresh mushrooms, facilitate the development and implementation of a marketing strategy to increase the consumption of fresh mushrooms amongst existing users.

The distinguishing characteristics of heavy users versus light users of fresh mushrooms identified through the psychographic variables provide evidence that

could facilitate the development of a positioning strategy (for example, primary benefit sought) and execution of the marketing mix to convey the positioning desired. (eg. pricing strategy, promotion strategy and creative execution)

In summary, the information provided by the psychographic variables has offered Tongaat Mushrooms the opportunity to more clearly understand and serve customer expectations within its current customer base. Furthermore, the significant distinguishing psychographic variables provide information that may help Tongaat Mushrooms to develop a marketing strategy and allocate resources more effectively and efficiently to take advantage of the two user groups identified in the segmentation process.

The author acknowledges however that these conclusions are her opinion and can only be tested and truly evaluated on development and implementation of a marketing strategy for Tongaat Mushrooms.

4.3 Conclusions and Recommendations on a Conceptual and Operational Definition of Psychographics

In Chapter 4, the literature revealed that there were conflicting opinions as to the definition and operationalization of psychographics for a segmentation study.

The author in this thesis defined psychographics to include all psychological measures hypothesized to be relevant to the product under study.

Chapter 5 further revealed that psychographic research had been sharply criticized for the haphazard approach to the selection of measures and variables to include in a segmentation study:

1) By attempting to analyze "everything with everything", psychographic market segmentation practice is merely an exploratory first stage of the research process (Hustad and Pessemier, 1974, Wind and Green, 1974).
2) Because of the limited theoretical development, psychographics research ignores the hierarchy of effects learning behaviour consumers go through

in making decisions (Wind, 1978).

3) Since adequate psychographic theory has not been developed, the selection of segmentation descriptors and scales is too often a "fishing expedition" (Hustad and Pessemier, 1974; Wind and Green, 1974).

In order to address these criticisms, the author developed a hypothetical model to guide the selection of psychographic measures to include in this thesis (refer Chapter 4, Figure 4.3).

Based on this model, six psychographic measures were included in the study, all of which were hypothesized to be relevant and therefore impact on the purchase of fresh mushrooms. Four of the six measures were product specific and two were more general relating to the activities surrounding food selection and preparation (refer Figure 4.1).

Based on this approach, the psychographic variables were found to play a significant role in the segmentation process. Furthermore, 5 of the 6 measures yielded variables that were significant in distinguishing between heavy users and light users of fresh mushrooms and both the general and product specific measures yielded significant variables.

Based on these findings, it is the authors opinion that psychographics should be defined in a broad sense as it was first intended when the term was introduced to the marketing literature but that the measures should be restricted to those relevant to the product under study. Furthermore, it is the authors opinion that psychographic variables have contributed significantly to this segmentation study because of the definition adopted and because of the approach to the operationalization of the psychographic measures. The selection of measures was guided by a model that attempted to identify the hierarchy of effects on consumer's purchase behaviour with respect to fresh mushrooms.

The author therefore concludes that psychographic measures, if confined

judgementally to those expected to be most relevant to a particular product category, and if their selection is guided by a model that addresses the motivational processes related to the product under study, much more insight is likely to be gained regarding the particular behaviour under study. The author, however, acknowledges that this conclusion is based only on the findings of a single study and therefore recommends that in the future further studies be undertaken that could validate this approach. If these studies support the findings of this thesis, then perhaps a conceptual and operational definition could then be recommended for universal application.

4.4 Conclusions and Recommendations on the Relationship of Psychographics with Non Psychographic Variables (Demographic, Geographic and Behavioural Measures).

The literature review revealed that pure demographics has been criticized for its lack of richness in describing target consumers (Chapter 5, Section 2). Demographics were said to lack dimension and therefore needed to be supplemented by other measures.

The 'non-psychographic' profile of heavy users and light users of fresh mushrooms, in this study, provided some useful information. In the authors opinion, however, it lacked richness and, in fact, raised many other questions.

In addition, the distinguishing non-psychographic variables only correctly identified 46% of heavy users and 52% of light users of fresh mushrooms. The addition of the psychographic variables increased the number of correctly classified respondents to 75%. A number of past studies have evaluated the contribution of psychographic variables versus demographic variables. The majority of these studies all persuasively argue that psychographic variables do provide additional information that is not provided by the demographic variables alone (Tigert et al, 1971 p 81-905; Webb et al, 1971 p 27-35; Nelson, 1969; Heller, 1970 p 45-57; Burnett, 1981 p 62-67).

In the authors opinion this study provides further evidence that support the above published findings.

The author therefore concludes that the psychographic variables provided additional information that was not provided by the demographic, geographic and behavioural measures and that this information was not redundant with that provided by the non psychographic variables.

Furthermore, the author concludes that the psychographic variables provided information that both identified and richly described the target segments that could not otherwise have been provided by the demographic, geographic and behavioural variables.[2]

4.5 Conclusions and Recommendations on the use of Psychographics with respect to Product Types

Chapter 5 revealed that a number of critics believed that psychographic measures were only applicable to use for certain types of products (Chapter 5, Section 6).

Products described as follows were thought to be inappropriate for psychographic research:

* Commodities
* Products purchased on the basis of price
* Products always purchased by experts
* Low involvement products
* Products purchased on specification

In the authors opinion, the purchase of mushrooms typifies a relatively low involvement decision process. Mushrooms do not offer much psychological gratification, do not have symbolic value for consumers and the price per pack is

[2] The author wishes to note that the interaction affects between the non-psychographic and psychographic variables are within each of these groups of variables was not tested for in this study. The conclusions drawn must therefore be viewed with caution.

relatively low (+- R3.00).

The findings of the study have, however, shown that the psychographic variables have contributed significantly to the segmentation study. In the author's opinion the psychographic variables are therefore of use even when the product under investigation could be classified as low involvement.

In addition, the discriminant analysis revealed that 7 of the 9 significant psychographic variables (78%) were product specific, while only 2 were general measures. This finding supports that of Haley (1984) (Chapter 6, Section 6) who concluded that the product specific measures were of greater use when the product category was classified as low involvement.

The author therefore concludes that the psychographic measures were of use for a low involvement product segmentation study and furthermore that the product specific measures yielded the more significant variables.

The author does, however, acknowledge that these conclusions are based on:

1) Her assumption that fresh mushrooms are a low involvement product category
2) Only the findings of this single study.

It would be necessary to validate these conclusions by testing the contribution of the psychographic variables in other segmentation studies for low involvement products.

5. Implications for Tongaat Mushrooms

The concept of market segmentation is based on the premise that consumers are different and that those differences are related to market demand.
The volume based market segmentation study implemented for Tongaat Mushrooms has highlighted that the light users of fresh mushrooms do differ significantly from the heavy users of fresh mushrooms both demographically, behaviourally and psychographically (refer Chapter 8 Part II Section 4). These differences, therefore, represent an opportunity for Tongaat Mushrooms to capitalize on.

Tongaat Mushrooms' marketing objective is to target the light users of fresh mushrooms with a marketing strategy aimed at increasing their consumption of the product. In order to achieve this objective, they wish to evaluate the appropriateness of the current marketing strategy against the findings of the empirical study and make changes where necessary. Tongaat Mushrooms will have to tailor their current marketing strategy to take advantage of the differences that were highlighted between heavy users and light users of fresh mushrooms in the segmentation study.

The distinguishing characteristics of light users of fresh mushrooms were detailed in Chapter 8, Part II, Section 4. In the author's opinion, these findings have the following implications for Tongaat Mushrooms and should be taken into account in developing a strategy aimed at light users to increase their consumption of fresh mushrooms:[3]

[3] The author wishes to note that firstly any suggestions made need to be further tested, and secondly Tongaat Mushrooms should interpret the results of the segmentation study together with that of the findings presented in Chapter 8 Part I which referred to the overall profile of current mushrooms users.

5.1 General Orientations Towards Home Cooking

Light users are more budget and cost conscious in selecting and preparing food. This impacts on their behaviour with respect to selection of new recipes. They confine their selection of new recipes to the more simple which does not require specific new ingredients to be bought.

Tongaat mushrooms currently feature more exotic recipes and expensive applications in their advertising campaign (Refer Appendix A).

This creative strategy will need to be re-evaluated if the campaign is to be targeted to light users.

5.2 Luxury Perception

A majority of light users perceive mushrooms to be a luxury and approximately 20% of light users would reserve their use for special occasions only. It is the authors opinion that these perceptions are "strengthened" by the current recession, but it is also the author's opinion that the current advertising strategy adopted by Tongaat Mushrooms reinforces these perceptions. (Refer Appendix A).

As is the case with Section 5.1 above, the current advertising strategy will have to be evaluated in order to address these issues. In the author's opinion, there exists an opportunity for Tongaat Mushrooms to develop an advertising campaign that focuses on mushrooms extending more 'ordinary' value for money meals (Eg Pasta) but at the same time, by the addition of mushrooms, making the 'more ordinary meal' something a little 'extra special'.

The perception of luxury also has implications for Tongaat Mushroom's current pricing strategy. Opportunities exist to make greater use of in-store short term promotional pricing strategies to stimulate purchase and help overcome the perception of luxury associated with the product class.

5.3 Product Category Perception

79% of light users do not perceive mushrooms to be an ordinary everyday vegetable. 20% of light users, in addition, perceive the primary benefit of using

mushrooms as adding 'something extra' to a recipe.

This "special" perception that mushrooms occupies in the minds of light users could perhaps present an opportunity to Tongaat Mushrooms. Any new creative strategy that is developed obviously needs to take into account light users perceptions, value orientations and role perceptions already noted, but at the same time, Tongaat Mushrooms should be careful not to "down grade" the image of mushrooms to that of an ordinary vegetable. The author noted in Chapter 6, that in interpreting psychographic research, the user must recognize the difference between products that compliment lifestyles and those that supplement lifestyles. This has specific bearing on the finding relating to category perception and should be taken into account when developing any creative strategy. A possible strategy to address this issue is that proposed by the author in 5.2.

5.4 Risk Perception

Light users perceive a greater degree of risk in the use and consumption of fresh mushrooms. Tongaat will need to address this issue in their marketing mix.

5.5 Benefits Sought

24% of light users rate 'ease of use and convenience' as the primary benefit of cooking with fresh mushrooms. This was followed by 22% and 20% of light users who respectively rate 'taste' and 'something extra special' as important.

The current positioning strategy of Denny mushrooms focuses on versatility which was not perceived as an important benefit by either light users or heavy users of fresh mushrooms. This may need to be readdressed in the light of the findings of the segmentation study. Positioning decisions should, however, also take into account the findings detailed in Chapter 8 Part I. Specifically the importance of freshness as the single most important attribute in influencing purchase for both heavy users and light users should not be ignored.

Almost all light users frequent supermarkets for their purchase of fresh mushrooms. Tongaat mushrooms should focus their activities on these retail outlets in targeting light users.

5.7 Brand Strategy

70% of light users currently were loyal to the Denny brand. A significantly higher proportion of light users than heavy users, however, preferred Silverstream.

This finding in the authors opinion, should be further investigated by Tongaat Mushrooms. There could be an opportunity for Tongaat Mushrooms to 'build' their second brand Silverstream to appeal specifically to light users. The brand could be positioned directly to meet the needs of light users and elements of the marketing mix could be tailored to the findings of this study.

6. Directions for Future Research

6.1 A Universally accepted Conceptual and Operational Definition of Psychographics

The literature revealed that the persistent confusion and lack of operational precision of psychographics has not only hampered past research but has also undermined its usefulness as a segmentation variable. (Chapter 4, Section 7).

What is required in the future is an appropriate definition that is universally accepted and commonly applied by the marketing community.

Research therefore needs to be undertaken in the future to establish the empirical relationships among the alternate definitions. Alternate operational definitions (including the definition employed in this study) need to be tested to find one that is most useful for the marketing community.

6.2 Standardization of Procedure

Product specific psychographic segmentation studies have been criticized for being too time consuming and too expensive to really be justified. The findings of this study highlighted that less than 10% of all the psychographic measures employed proved to be of significance. Furthermore, since each study includes variables specific to the product category, it is very difficult to validate and cross check the results.

General psychographic segmentation studies have, however, also been sharply criticized for failing to produce meaningful results that have any bearing on the product under study.

In the authors opinion what is required is a "blending of the two approaches". There is a need to move towards some degree of standardization in the future, otherwise each product specific psychographic study tends to be a very 'ad hoc' and isolated exercise that has to be repeated each time a new problem arises.

Psychographic studies could be, for example, standardized for an industry such as the food industry. In this case the general measures (relating to food preparation

and selection) could be standardized for all food products and only the product specific measures would have to be tailored to each product under investigation. This would enable market researchers to capitalize on some of the advantages of the more general approach.

In addition marketers today are faced with consumers whose lifestyles appear to be continuously changing. Through adopting a more standardized approach (specific to an industry) it enables marketers to track general psychographic information. It should therefore be possible to determine just what needs, values etc are changing amongst which population segments and how fast.

It is the authors opinion that such an approach should be tested in the future because it affords important benefits to the marketing community. Psychographic research could perhaps evolve to the stage where some type of hierarchy could be developed which could enable marketers to predict specific measures based on the respondents more general measures?

6.3 Relationship of Psychographics with Demographics

A number of past studies have focused on evaluating the contribution of psychographics VERSUS demographics.

There is little evidence, however, of research that measures the overlap between the psychographic and demographic variables. From the literature it appears that the full nature and extent of the potential redundancy between psychographic and demographic measures is not well understood.

The question that needs to be addressed in the future is, does one need to include both psychographic and demographic variables in a study? Additional research efforts should therefore be devoted to determining the extent to which psychographic variables are proxy measures for demographics.

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