

EXCLUSIVITY STRATEGIES IN PRICING AND BRAND EXTENSION

by

Ioannis Pantzalis

---

A Dissertation Submitted to the Faculty of the  
COMMITTEE OF BUSINESS ADMINISTRATION

In Partial Fulfillment of the Requirements  
For a Degree of

DOCTOR OF PHILOSOPHY

In the Graduate College

THE UNIVERSITY OF ARIZONA

1 9 9 5

## **INFORMATION TO USERS**

**This manuscript has been reproduced from the microfilm master. UMI films the text directly from the original or copy submitted. Thus, some thesis and dissertation copies are in typewriter face, while others may be from any type of computer printer.**

**The quality of this reproduction is dependent upon the quality of the copy submitted. Broken or indistinct print, colored or poor quality illustrations and photographs, print bleedthrough, substandard margins, and improper alignment can adversely affect reproduction.**

**In the unlikely event that the author did not send UMI a complete manuscript and there are missing pages, these will be noted. Also, if unauthorized copyright material had to be removed, a note will indicate the deletion.**

**Oversize materials (e.g., maps, drawings, charts) are reproduced by sectioning the original, beginning at the upper left-hand corner and continuing from left to right in equal sections with small overlaps. Each original is also photographed in one exposure and is included in reduced form at the back of the book.**

**Photographs included in the original manuscript have been reproduced xerographically in this copy. Higher quality 6" x 9" black and white photographic prints are available for any photographs or illustrations appearing in this copy for an additional charge. Contact UMI directly to order.**

# **UMI**

A Bell & Howell Information Company  
300 North Zeeb Road, Ann Arbor, MI 48106-1346 USA  
313/761-4700 800/521-0600



EXCLUSIVITY STRATEGIES IN PRICING AND BRAND EXTENSION

by

Ioannis Pantzalis

---

A Dissertation Submitted to the Faculty of the  
COMMITTEE OF BUSINESS ADMINISTRATION

In Partial Fulfillment of the Requirements  
For a Degree of

DOCTOR OF PHILOSOPHY

In the Graduate College

THE UNIVERSITY OF ARIZONA

1 9 9 5

**UMI Number: 9620410**

---

**UMI Microform 9620410**  
**Copyright 1996, by UMI Company. All rights reserved.**

**This microform edition is protected against unauthorized  
copying under Title 17, United States Code.**

---

**UMI**  
**300 North Zeeb Road**  
**Ann Arbor, MI 48103**

THE UNIVERSITY OF ARIZONA  
GRADUATE COLLEGE

2

As members of the Final Examination Committee, we certify that we have  
read the dissertation prepared by Ioannis Pantzalis  
entitled Exclusivity Strategies in Pricing and Brand Extension

and recommend that it be accepted as fulfilling the dissertation  
requirement for the Degree of Doctor of Philosophy

Lipankar Chakravarti  
DIPANKAR CHAKRAVARTI

1/26/95  
Date

Ambar G. Rao  
AMBAR G. RAO

1/26/95  
Date

P.K. Kannan  
P.K. KANNAN

1/26/95  
Date

Jane Hill  
JANE HILL

1/26/95  
Date

Fred S. Matter  
FRED S. MATTER

1/26/95  
Date

Final approval and acceptance of this dissertation is contingent upon  
the candidate's submission of the final copy of the dissertation to the  
Graduate College.

I hereby certify that I have read this dissertation prepared under my  
direction and recommend that it be accepted as fulfilling the dissertation  
requirement.

Lipankar Chakravarti and Ambar G. Rao  
Dissertation Director  
DIPANKAR CHAKRAVARTI AND AMBAR G. RAO

12/1/95  
Date

## STATEMENT BY AUTHOR

This dissertation has been submitted in partial fulfillment of requirements for an advanced degree at The University of Arizona and is deposited in the University Library to be made available to borrowers under rules of the library.

Brief quotations from this dissertation are allowable without special permission, provided that accurate acknowledgment of source is made. Requests for permission for extended quotation from or reproduction of this manuscript in whole or in part may be granted by the head of the major department or the Dean of the Graduate College when in his or her judgment the proposed use of the material is in the interests of scholarship. In all other instances, however, permission must be obtained from the author.

SIGNED: 

## ACKNOWLEDGEMENTS

I would like to express my appreciation to my dissertation chairpersons, Professor Dipankar Chakravarti and Professor Ambar Rao for their support and guidance through all stages of my dissertation research project. Their interest, advice, and support throughout my attendance of the doctoral program has been invaluable in helping me develop the skills necessary for an academic career. Additionally I would like to thank Professors P.K. Kannan and Jane Hill, the other two members of the committee for their insightful ideas and enthusiasm.

Finally, I would like to thank my parents Evangelos and Aphrodite as well as my brother Christos for their continuous support and help. Without them nothing would have been possible. Special thanks to my friend Katie Wiles who was there when I needed her most.



## TABLE OF CONTENTS

LIST OF ILLUSTRATIONS.....	8
LIST OF TABLES.....	9
ABSTRACT .....	11
1. LITERATURE REVIEW.....	14
1.1 THE PHENOMENON AND TYPES OF BRAND EXCLUSIVITY...	14
1.2 CONCEPTUAL EXPLANATIONS .....	19
1.3 OVERVIEW OF THE DISSERTATION STUDIES .....	26
1.4 ORGANIZATION OF THE DISSERTATION .....	28
2. PRICE AND QUANTITY DECISIONS FOR A LIMITED-EDITION	
BRAND: MODEL AND HYPOTHESES .....	30
2.1 MODEL ASSUMPTIONS AND DEVELOPMENT .....	30
2.2 TRANSFER OF EXCLUSIVITY GOODWILL.....	35
2.3 CASE 1: EXOGENEOUS LOWER-END MARKET PRICE .....	36
2.4 CASE 2: ENDOGENEOUS LOWER-END MARKET PRICE .....	39
2.5 HYPOTHESES FOR EMPIRICAL TESTS.....	42
3. EXCLUSIVITY TRANSFER FOR LIMITED EDITION PRODUCTS: AN	
EXPERIMENTAL INVESTIGATION .....	46
3.1 EXPERIMENTAL DESIGN .....	46
3.2 MEASUREMENTS .....	53
3.3 RESULTS.....	56
3.3.1 MANIPULATION CHECKS .....	57
3.3.2 HYPOTHESIS TESTS .....	61

## TABLE OF CONTENTS - continued

3.4	DISCUSSION .....	86
4.	A MODEL FOR PRICING AN EXCLUSIVE BRAND GIVEN SIMULTANEOUS DIFFUSION IN TWO POPULATIONS .....	93
4.1	MODEL ASSUMPTIONS AND DEVELOPMENT .....	93
4.2	SIMULATIONS FOR OPTIMAL PRICE .....	100
4.3	HYPOTHESES TO BE TESTED .....	104
5.	AN EXPERIMENTAL INVESTIGATION OF THE MODEL FOR PRICING AN EXCLUSIVE BRAND GIVEN SIMULTANEOUS DIFFUSION IN TWO POPULATIONS .....	107
5.1	EXPERIMENTAL DESIGN .....	107
5.2	MEASUREMENTS .....	111
5.3	RESULTS .....	114
5.3.1	SUBJECT SELECTION .....	114
5.3.2	MANIPULATION CHECKS .....	116
5.3.3	HYPOTHESES TESTS .....	119
5.4	DISCUSSION .....	137
6.	SUMMARY OF RESULTS AND FUTURE RESEARCH .....	143
APPENDICES		
	APPENDIX A: Background for Study 1 .....	150
	APPENDIX B: Stimuli Descriptions for Watches: No Supply Limitations/Fixed Comparison Option .....	151
	APPENDIX C: Stimuli Descriptions for Watches: Supply Limitation .....	153

## TABLES OF CONTENTS - continued

APPENDIX D: Task Instructions for Watches .....	154
APPENDIX E: Stimuli Descriptions for Wine: No Supply Limitation/Fixed Comparison Option .....	159
APPENDIX F: Stimuli Descriptions for Wine: Supply Limitation .....	161
APPENDIX G: Task Instructions for Wine .....	162
APPENDIX H: Questionnaire for Watches .....	167
APPENDIX I: Questionnaire for Wine .....	174
APPENDIX J: Background for Study 2 .....	181
APPENDIX K: Social Group Descriptions .....	183
APPENDIX L: Stimuli Descriptions .....	184
APPENDIX M: Questionnaire .....	201
REFERENCES .....	209

## LIST OF ILLUSTRATIONS

FIGURE 1: Demand Curve Shift for Limited-Edition Brand ...	31
FIGURE 2: Interdependence of Diffusion Process .....	95
FIGURE 3: Diffusion in H as a Function of H-L Social Distance .....	97
FIGURE 4: Diffusion in L as a Function of H-L Social Distance .....	99
FIGURE 5: Sales in H and L at Different Price Levels .....	102
FIGURE 6: Net Present Value of Profits for Different Price Levels .....	104
FIGURE 7: Optimal Price for Different Group Size Ratios ..	105
FIGURE 8: Social Distance and Optimal Price between H-L .....	108
FIGURE 9: Desirability Scores and L3-H Distance .....	132
FIGURE 10: Likelihood of Purchase Scores and L3-H Distance .....	133
FIGURE 11: Percent of Choice for Pheoton and L3-H Distance .....	134

## LIST OF TABLES

TABLE 1:	Stimuli Pretests for Watches .....	49
TABLE 2:	Stimuli Pretests for Wine .....	51
TABLE 3:	Task Description Measures .....	58
TABLE 4:	Limited Supply Test for Watches .....	59
TABLE 5:	Limited Supply Test for Wine .....	60
TABLE 6a:	Correlation Matrix of Exclusivity Measures for Watches .....	61
TABLE 6b:	Correlation Matrix of Functional Quality Measures for Watches .....	62
TABLE 7a:	Correlation Matrix of Exclusivity Measures for Wine .....	62
TABLE 7b:	Correlation Matrix of Functional Quality Measures for Wine .....	63
TABLE 8:	Percent of Variation explained by Principal Component .....	63
TABLE 9a:	Means of the Attractiveness Measures for Watches .....	64
TABLE 9b:	Means of the Attractiveness Measures for Wine .....	65
TABLE 10:	H1 Tests for Watches and Wine .....	72
TABLE 11:	H2 Tests for Watches and Wine .....	78
TABLE 12:	H3 Tests for Watches and Wine .....	82

## LIST OF TABLES - continued

TABLE 13: H4 Tests for Watches and Wine .....	83
TABLE 14: Stimuli Pretests .....	113
TABLE 15: Task Description Measures .....	121
TABLE 16a: Correlation Matrix of EX Measures for L3 .....	124
TABLE 16b: Correlation Matrix of FQ Measures for L3 .....	125
TABLE 17a: Correlation Matrix of EX Measures for H .....	125
TABLE 17b: Correlation Matrix of FQ Measures for H .....	125
TABLE 18: Principal Components .....	126
TABLE 19a: Mean Attractiveness Measures L3 Subjects as Anchor Group .....	127
TABLE 19b: Mean Attractiveness Measures H Subjects as Anchor Group .....	128
TABLE 20: Summary of Hypotheses and Mediating Variables Tests .....	139

### ABSTRACT

The primary goal of this research is to explore the issue of brand exclusivity. It focuses on why and under what circumstances consumers value exclusive brands, as well as on the strategies by which managers can best create and maintain brand exclusivity while using it to maximize profits. The dissertation consists of two studies.

In the first study, exclusivity is examined as a function of limited supply, and the research (a) identifies the conditions under which limited supply is valued most by the consumers, and (b) determines the optimal quantity and price for limited-edition brands.

We model the goodwill transfer from an exclusive, limited-edition brand to a lower-end brand with the same family brand name. This goodwill transfer results in the optimal supply level for the limited-edition brand depending not only on its price-demand curve, but also on the price-demand curve of the lower-end brand.

The model is analyzed to develop hypotheses regarding consumer choice behavior for different consumption

motivations and consumption situations. We test these hypotheses in an experiment. The experiment shows that limited supply for the high-end brand results in a transfer of status symbolism and a higher preference for the lower-end brand extension.

In the second study exclusivity is examined as a function of high price and the research (a) explores how the diffusion of the brand in different social groups affects exclusivity perceptions and value among members of these groups, and (b) determines the price that maximizes profits given the interdependence of diffusion in the two populations.

In the second study, we model the adoption of a price-based exclusive brand by two populations that represent two distinct social groups with different price-demand elasticities. The brand is targeted to the upper income group (target group), but is exclusive for the lower income group (outside group).

The diffusion of the brand in the two populations is interdependent and is affected by the social distance between the target group and the outside group. This process is modelled using an extension of the Bass model. The interdependence of the diffusion process is tested in an



experiment where relative diffusion in the two groups and the social distance between them are manipulated.

## 1. LITERATURE REVIEW

"Though styles may change,  
snobbery is forever"

The Economist

"It is so crowded, nobody  
goes there anymore."

Yogi Berra

### 1.1. The Phenomenon and Types of Brand Exclusivity

Recent Jaguar print ads in upscale US magazines such as Arts and Antiques and Islands described a new luxury model, the XJ220. Only 350 units of this limited edition model were produced, and the car was not even available in the US. Despite this, the bulk of the ad copy concentrated on the XJ220, and other less expensive Jaguar models available in the US were mentioned only later in the ad. It appears that Jaguar was trying to create a perception of exclusivity for its high end product in the hope that this perception would transfer to its lower end products. Perhaps the expectation was that this exclusivity transfer would create a more favorable demand curve for lower end Jaguar models relative to what would be obtained without such transfer.

Webster's defines of an exclusive item is one that is

"... limited to possession, control or use by a single individual or group." Our use of the term exclusivity in this dissertation is consistent with Webster's definition. A product may attain exclusivity if it is somehow only selectively accessible available to a limited target market and is scarce for all other consumers. From a managerial standpoint, selective accessibility can be achieved through a number of different mechanisms, e.g. by limiting supply, by setting high prices, by establishing formal qualification standards, or by using a combination of the above methods.

This dissertation reports two studies of brand exclusivity phenomena. In the first we focus on the phenomenon of exclusivity based on limited supply. Specifically, we look at a managerial strategy where exclusivity is attained for a multi-product brand by deliberately limiting the supply of a product at the upper-end of the line. We then look at how exclusivity goodwill can be transferred from the upper-end product to a lower-end counterpart in the brand's product line.

The practice of offering limited-edition products in the marketplace is fairly common. Thus, limited edition products are found in established categories such as automobiles, furniture, clothing, watches and wine; as well as in collectibles such as baseball cards, signed art prints, and comic books. Thus, some classic cars, Swatch watches and the

first edition of "The death of Superman" are available in very limited quantities. One particularly interesting example of the use of a limited supply strategy is provided by Dom Perignon. The company started as a private winery producing wine for the use of the Moet and Chandon families. Today, Dom Perignon Champagne is available to the general public, but the supply is kept low by producing it only in "... those years when the *chef des caves* at Moet deems the best grapes are good enough" (Cornfeld and Edwards 1983). The limited number of bottles produced in the so-called "good years" tend to appreciate in value quite significantly over time. As yet another example (Dolan 1990) Ferrari introduced its F40 using a similar limited production tactic. Fewer than 1,000 units were made of the automobile and then were offered at a sticker price in the neighborhood of \$350,000. The demand which exceeded the supply and rapidly pushed resale prices over \$1,000,000. Porsche and Jaguar used similar tactics with limited editions of the Porsche 959 and Jaguar XJ220 respectively. Jaguar sold all 350 XJ220s in less than 10 days despite a sticker price of \$550,000. A Jaguar spokesman Ian Morris reportedly observed "... if you say to a rich man, 'You can't have it,' he'll want it more. That's part of the appeal" (Dolan 1990). According to Nancy Olson, editor of the *Pen World* in Dallas similar phenomena occur in the market for

luxury fountain pens (Cowell, 1995). Carlo Goldoni, a limited-edition fountain pen from Aurora was introduced in 1993 and each of its 1,492 units was sold for \$900. The secondary market price has now climbed to about \$2,700. Montblanc's managers also report that production is deliberately kept below capacity to maintain scarcity.

These examples show that the unfulfilled demand for the limited-edition product leads to the development of a resale market in which the product is sold at prices that substantially exceed the original price set by the producer. The resale market price premium suggests that limited-edition products may provide a signal of exclusivity and acquire an additional utility which makes them more desirable. Increased desirability produces an upward shift in the demand curve of the limited-edition product which is then reflected in the observed price premium in the resale markets. Moreover, there is a possibility that the exclusivity of the limited-edition product transfers down the line to lower-end products in the brand line. Our first study models and empirically explores this "exclusivity based on limited supply phenomena."

In the second study of the dissertation we focus on the phenomenon of exclusivity based on high price. We examine the managerial strategy of pricing a product at such a high level that only a small target market can afford it. This restricted access creates an aura of exclusivity that

enhances the product's desirability both for the target market group that can afford it as well as with other consumers who perceive enhanced status in owning the product.

Products that attain exclusivity through high prices are often termed "positional goods." Consumers value these goods not despite their expense, but because of it. As long as consumers in the target market of a positional good are willing to keep it exclusive, the price will remain high. For most goods, real prices tend to fall over time due to technological advances in design, production and distribution. However, the prices of positional goods tend to rise both in nominal and real terms because of the need to keep them exclusive.

For example, the cost of two ounces of Russian caviar rose 535% from \$1.40 in 1912 to \$129.00 in 1992 a 2.3% average annual increase in real terms sustained over 80 years. A Dunhill lighter "Rollagas" silver plate cost \$19.00 in 1958 and \$205.00 in 1992. This 122% increase reflects a sustained 2.4% average annual increase in real terms. The price of a Parker Duofold fountain pen increased from \$7.30 in 1927 to \$236 in 1992 sustaining a 2.2% average annual increase in real terms over 65 years. The most expensive two-seater Jaguar cost \$1,085.00 in 1932 and \$73,545 in 1992 which is a 560% increase in real terms (3.2% average annual increase in real terms). Finally, a Cartier Tank watch cost

\$155.75 in 1921 and \$4,180 in 1992 which is a 242% increase in real terms or 1.7% average annual increase in real terms (The Economist 1993). These examples indicate that the price of exclusivity has gone up significantly for status symbols over the last 50 years (The Economist 1993).

Products that attain exclusivity through high price have to be sensitive to potential devaluation that may occur with price discounts. In 1992 a dispute broke out between several big perfume houses and a group of British retailers. The retailers had acquired luxury brands such as Chanel No.5 on the "grey market" and were reselling them for prices as low as 60% below the recommended price. The key issue from the point of view of the perfume houses was that the essence of a luxury good is its exclusivity, and when the exclusivity is based on price only, low prices convey the wrong signal to consumers. In other words, exclusive brands face a trade-off in maintaining their higher prices. Although lowering prices may enhance sales outside the target group, it may also devalue the product in the eyes of the original target customer group.

### 1.2 Conceptual Explanations of Exclusivity Phenomena

The additional utility that consumers perceive due to the exclusivity generated by either limited supply or high prices may be interpreted from different perspectives. In

this dissertation we adopt a predominantly sociological/anthropological account of the phenomenon and model its managerial implications within an economic framework. This sociological/anthropological perspective argues that individuals are not isolated when they make purchasing decisions; they are often influenced by the groups to which they belong or aspire to (Bourne 1957; Burnkrant and Cousineau 1975; Deutsch and Gerard 1955; Witt and Bruce 1972; Bearden and Etzel 1982; Brinberg and Plimpton 1986; Park and Lessig 1977). These reference groups are defined as "a person or group of people that significantly influences an individual's behavior" (Bearden and Etzel 1982, pp. 184) and include peer groups, aspirational groups and negative groups. Peer groups (i.e. a group of persons consisting of his/her peers) play a particularly major role in influencing consumer purchases. We argue here that exclusive brands function as social stimuli that assign status to the brand user from the perspective of his/her peers.

Veblen (1899) was the first modern economist and social critic to examine the phenomenon of the symbolic value of expensive positional goods. He argued that with rising living standards, consumers tend to be less concerned with subsistence and comfort, and instead focus on obtaining the "esteem and envy of fellow men." Visible, expensive and thus difficult to acquire goods are best suited to function as



status symbols because, as Veblen wrote, "in order to gain and hold the esteem of men, wealth must be put in evidence, for esteem is awarded only on evidence."

The tendency of human societies to organize themselves in hierarchies seems to be universal (Dumont 1970). This in turn results in members of a society trying to establish ways to be able to assess each other's status in the hierarchical system. The more flexible and dynamic the social hierarchy system, the more likely it is that status is negotiated among members of the society. Without formal deference entitlements in social interactions among persons unaware of each other's status, evaluations are probably based on visual cues (Eisenstadt 1968; Dawson and Cavell 1987). Many sociologists argue that status is now evaluated based primarily on material items (Goffman 1951; Form and Stone 1957; Simmel 1904). Other scholars claim that the greater the degree of social mobility in society, the higher the display of status symbols (Bensman and Lilienfeld 1979; Douglas and Isherwood 1979).

In such social hierarchies, a brand's ability to encode status rests on the extent to which its ownership and consumption is confined to desirable, aspirational groups (Dawson and Cavell 1987). Park and Lessig (1977) divided reference group influences in three categories: informational, utilitarian, and value-expressive. When

adopting products that function as status symbols, the reference group influence is value-expressive. In other words, the individual's motivation is to enhance the self-concept through referent identification (Brinberg and Plimpton 1986; Kelman 1961). This referent identification takes place when the individual attempts to imitate the aspirational group's consumption pattern by acquiring brand(s) that symbolize membership in the group.

We claim that product ownership restricted by either limited supply or high prices to such aspirational groups creates exclusivity and turns the brand into a status symbol. In the case of limited supply, the process occurs in two stages. First the sticker price separates the group of people which can afford the product from the group which cannot. Second, only a small number of customers (less than or equal to the number of units supplied) actually acquire the product, even though many more can afford the sticker price and desire it. Exclusivity turns the limited edition product into a status symbol and enhances its desirability. The extent of a product's supply limitation informs potential buyers of its specific exclusivity level and determines the extent to which there is an upward shift of the demand curve. Consumers demand more of the brand than what would be demanded at the introductory price. The supply of the brand being limited, this demand remains unmet and the brand

realizes higher prices in the resale market.

The preceding explanation of the enhanced desirability of the exclusive product that functions as a status symbol also speaks to how exclusivity goodwill might be transferred from an upper-end product H to the lower-end brand L in the same brand line. The high price of a limited-edition product restricts its acquisition and ownership to upper-income groups. Lower-income consumers find it difficult to come up with the actual cost of acquiring the product, or deal with the opportunity cost of keeping it. Thus, ownership of the exclusive product is likely to be restricted to upper-income aspirational groups and the product's brand name may even become a symbol of membership in such a group. Lower-income consumers who aspire to join this aspirational group may try to imitate its consumption patterns. However, since they cannot acquire the limited-edition product, they must stay content with a product lower in the brand line that is within their feasible price range. In other words, they are likely to attribute some of the meaning (i.e. the status) associated with the brand concept of the upper-end product (Park, Milberg and Lawson 1991) to the lower end extension. This exclusivity goodwill transfer from H makes the lower-end extension L more attractive relative to other brands in the same price- quality range in the product category.

When exclusivity is based on high prices and product

ownership is consequently restricted to higher-income aspirational groups, the product turns into a status symbol. Such a product has a dual status differentiation function. Originally, the highly-priced product is targeted to and widely adopted by a relatively small, higher-income group. This target group functions as an aspirational group for an outside, lower-income group for which the product is exclusive due to its high price. Thus, the first function is that the product differentiates status between the target group and the outside group. However, price can rarely guarantee absolute exclusivity; some members of the outside group may be able to acquire the product. Note also that ownership of the exclusive product which is associated with membership in the aspirational group elevates the status of the persons who manage to acquire it. This in turn makes the product more desirable. The second status differentiation function therefore is within the outside group. Notice that the product does not differentiate status within the targeted group because it is widely available within this group and thus not exclusive.

As status markers, exclusive products indicate that the person who consumes, uses, or owns them occupies a certain position in the group (Reilly and Rathje 1985). The ability of the product to function as a status symbol in the above described way rests on two assumptions. First, the exclusive

product has to be socially desirable (Blumberg 1974). Secondly, the product's ability to function as a status symbol for a certain group rests on the extent to which the majority of the group's members make similar status attributions from the product (Dawson and Cavell 1987). This requires that groups be fairly homogeneous and that members encode and decode the symbolic meaning of the product in the same way (see Belk et al. 1982). According to Eco (1976), codes are like languages and they consist of primary elements (words, phonemes) and rules ("grammar") for interrelating these elements. One can think of consumption as a learned behavior with rules similar to the rules of a language. Groups that differ in their lifestyles, differ in their "consumption codes." Thus, they speak different "consumption languages." Within groups, however, the consumption language is the same. For example, according to the consumption language of the target group, the exclusive, high priced product does not convey status differentiation within the group, whereas according to the consumption language of the outside group it does. For the purposes of this research we base the development of the models and the hypotheses in the next sections on the premise that the two assumptions are met.

The increased desirability of scarce items has also been explained from psychological perspectives. For example, the

uniqueness theory of the self (Fromkin 1970) states that people have an intrinsic need for uniqueness and some sense of specialness. The possession of a scarce resource such as a limited-edition brand provides a valued sense of self-uniqueness (Snyder 1992). Other researchers have also provided individual level, psychological explanations of such scarcity phenomena (Lynn 1992). The explanations invoke somewhat different mechanisms. However, they are consistent with the idea (Study 1) that a limited-edition product is perceived as more desirable, commands a price premium and allows for potential transfer of its exclusivity goodwill to products lower in the brand line. These explanations can also be reconciled with the notion in Study 2 that an expensive brand is perceived as more desirable due to its exclusivity and ability to discriminate status among different groups.

### 1.3 Overview of the Dissertation Studies

In summary, this dissertation focuses on products which achieve exclusivity either through a limited supply strategy or through a high price strategy and as a consequence function as status symbols. Chapters 2 and 3 focus on exclusivity based on limited supply. We develop an economic model based on the behavioral phenomenon of the transfer of exclusivity goodwill from a limited-edition, upper-end product to its lower-end counterpart in a brand line. This

model is then used to explore optimal management decisions.

The phenomenon may be intuitively explained by invoking two processes. First, the deliberately limited supply of the upper-end product H turns it into a status symbol and makes it more desirable. We model this increased desirability as an upward shift of the demand curve for H. Thereafter, some of this exclusivity goodwill transfers from the upper-end product H to other lower-end products in the brand line. This transfer of exclusivity goodwill in turn enhances the desirability of the lower-end product L. This enhanced desirability is modeled as an upward demand curve shift. The exclusivity goodwill transfer is facilitated by the existence of an association between H and L due to either a common brand name or by the the development of such associations through other marketing mix influences. The expectation is that the stronger the association between H and L, the higher the exclusivity goodwill transfer from H to L.

The behavioral assumptions of the model are tested in an experimental setting. We manipulate the supply of an upper-end product and measure the goodwill transfer to a lower-end product in the brand line. The level of goodwill transfer is assessed relative to a similar two-level product in a different brand line where no supply limitations exist for the upper-end counterpart. Additionally, we manipulate the consumption motivation (symbolic versus functional) and

the consumption situation (public versus private) to explore variables that are hypothesized to influence the level of exclusivity transfer. The experiment is replicated for two product types, watches and wine.

Chapters 4 and 5 focus on exclusivity based on high price alone. We model this by using an extension of the Bass model, capturing the interdependence of the brand's diffusion in two populations. Exclusivity and devaluation effects on the brand are modelled using a price sensitivity parameter (imitation/devaluation parameter). The parameter value is a function of the social distance between the two populations. We use a simulation to determine the profit-maximizing price given the simultaneous diffusion in the two populations. We also use a simulation to examine the effects of various relative sizes of the populations as well as the effects of various social distances between them on the profit-maximizing price.

The behavioral assumptions of the model are also tested in an experimental setting. In this empirical work, we manipulate the relative diffusion of the brand in the two populations as well as their social distance. We measure the effects of these manipulations on the preference for the product relative to the one of a similar product.

#### 1.4 Organization of the Dissertation

The remainder of the dissertation is organized as



follows. In Chapter 2, we formulate a mathematical model of exclusivity based on limited supply of an upper-end product and its transfer to a lower-end product extension in the brand line. We also present the behavioral hypotheses that follow from the model. In Chapter 3 we report an empirical study to test these hypotheses. We describe the methodology, present the study results and conclude by discussing the findings.

The second part of the dissertation focuses on exclusivity based on high price. In Chapter 4 we develop a model of simultaneous diffusion in two linked populations. We explore the managerial implications that stem from the model and present a set of behavioral hypotheses for test. In Chapter 5 we describe an empirical study to test these hypotheses. We also present and discuss the results. Finally, Chapter 6 summarizes the key insights derived from the two studies and suggests areas for future research.

## 2. PRICE AND QUANTITY DECISIONS FOR A LIMITED-EDITION

### BRAND: MODEL AND HYPOTHESES

#### 2.1 Model Assumptions and Development

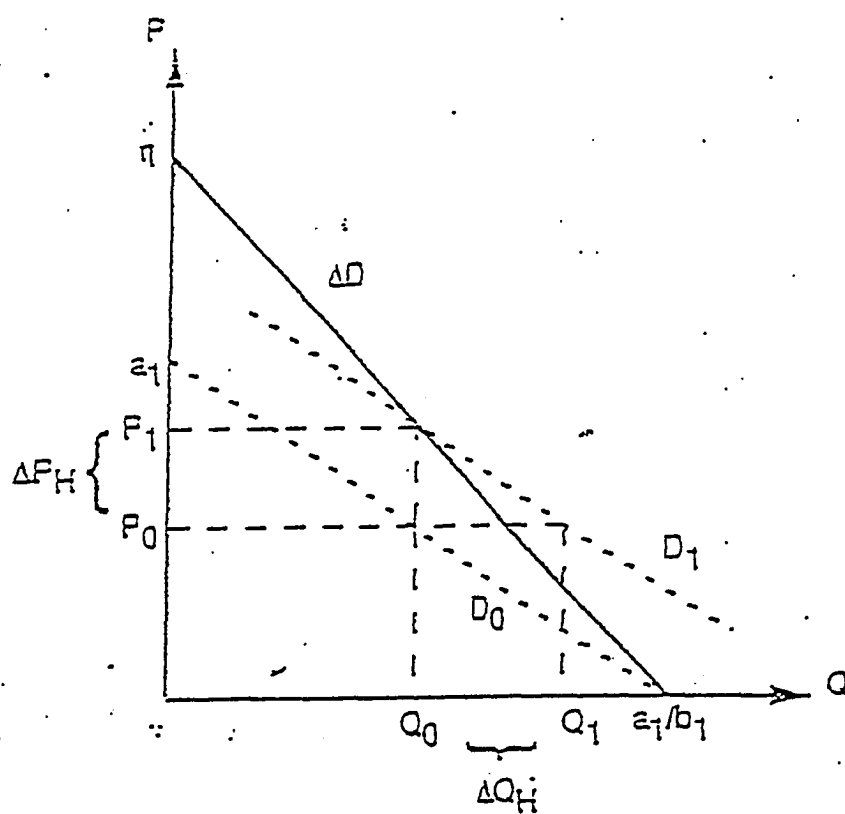
In this Chapter we present a mathematical model of exclusivity based on limited supply of an upper-end product and its transfer to a lower end extension in the brand line. Thus, two products share the same brand name. The upper end product H is targeted to higher income consumers and its supply is limited. The lower end product L is targeted to lower income consumers. Moreover, the limited edition product H is socially desirable, functioning as a status symbol.

We assume that H and L are associated in the consumer's mind due to both the shared brand name and marketing activities. This association allows for some goodwill transfer from H to L. For the time being, we assume that there are no reciprocal transfer effects from L to H.

H is assumed to have a linear demand function:  $P_0 = a_1 - b_1 Q_0$ . The firm can manipulate two variables, supply and price. Other elements of the marketing mix are assumed fixed.

The firm chooses a supply level  $Q_0$  and a price  $P_0$  for the high end product H. The brand's perceived exclusivity is determined by the combination of  $Q_0$  and  $P_0$  relative to the

FIGURE 1: Demand Curve Shift for Limited Edition Product



shape and location of its demand-price curve. The exclusivity due to limited supply increases the perceived value of the product for the consumer by turning it into a status symbol. This increase in perceived value results in an upward shift of the product's demand curve. This is reflected in a price premium in the secondary market. The above behavioral hypothesis is illustrated in Figure 1.

$D_0$  is the original demand curve that would operate if no exclusivity perceptions were created for H. However, the stated supply limitation of  $Q_0$  essentially creates a perception of exclusivity and makes the product more desirable. This desirability raises the imputed price of H to  $P_1$ . Thus, for the fixed supply level  $Q_0$  the realized demand is as if the demand curve had shifted upward by  $\Delta P_H$  to the line denoted by  $D_1$ .

The shift reflects the aggregate increase in the brand's desirability due to its perceived exclusivity for the specific "restricted" supply level  $Q_0$ . However, as the "restricted" supply level  $Q_0$  changes, the extent of the upward shift of the demand curve also varies. Perceived exclusivity increases along with the consumers' perceived value as the supply level is "restricted" at lower values of  $Q_0$ . Thus the price premium  $\Delta P_H$  increases as  $Q_0$  declines. We assume that this relationship is linear. The line denoted by  $\Delta D$  above the price-demand curve in Figure 1 traces the locus

of the price level which results from restricting supply at different levels of  $Q_0$ . The highest price premium is obtained for  $Q_0=1$  and there is no price premium at  $Q_0 = a_1/b_1$ . Thus,  $\Delta D$  defines the locus of prices for all values of  $Q_0$  between 1 and  $a_1/b_1$ .

$\Delta D$  may also be viewed as the demand curve for the resale market. The gap between  $D_0$  and  $\Delta D$  represents the price premium for the corresponding supply quantities  $Q_0$ . Thus, this new demand curve  $\Delta D$  is defined by:

$$\Delta P_H + P_0 = \eta - \zeta Q_0 \quad (1)$$

Substituting for  $P_0$ , the price premium is given by:

$$\Delta P_H = \eta - a_1 - (\zeta - b_1)Q_0, \quad \eta > a_1, \quad \zeta > b_1 \quad (2)$$

and  $\partial \Delta P_H / \partial \eta > 0$ ,  $\partial \Delta P_H / \partial Q_0 < 0$ .

Since  $\Delta P_H = 0$  for  $Q_0 = a_1/b_1$  we conclude that:

$$\eta / \zeta = a_1 / b_1 \quad (3)$$

Thus, since  $a_1$  and  $b_1$  are fixed, equation (3) shows that the intercept  $\eta$  (the maximum price on  $\Delta D$ ) determines the slope  $\zeta$  of  $\Delta D$ .

Consistent with the literature (Bearden and Etzel 1982), we hypothesize that the magnitude of  $\eta$  depends on both the consumption motivation and the characteristics of the consumption situation. First, products consumed for utilitarian (i.e. functional) purposes have less status symbolism potential relative to products whose consumption

is driven by symbolic motivations. Consequently, the former will receive a lower exclusivity "burst." In other words, products consumed for utilitarian purposes will command a lower price premium in the secondary market when their supply is equivalently restricted.

Second, products consumed in public are more visible and hence more conducive to serving as status symbols (Eisenstadt 1968; Dawson and Cavell 1987). The public/private distinction is similar to Bourne's (1957) concept of the conspicuousness of product consumption. Bourne defined conspicuousness as capturing two factors: private versus public and luxury versus necessity. These two factors were also used by Bearden and Etzel (1982) to operationalize the term, and were adapted by Brinberg and Plimpton (1986). However, in contrast to these authors, we look strictly at the difference between private and public consumption situations. We argue that publicly consumed products should command a higher price premium in the secondary markets relative to products consumed privately.

To incorporate these ideas in the model, we define a variable  $u$  that indicates the utilitarian (versus symbolic) nature of the consumption purpose. Higher values of  $u$  denote more utilitarian (versus symbolically) motivated consumption. Similarly, we define a variable  $s$  that indicates the public-private nature of the consumption situation. Higher values

of  $s$  denote a more publicly-oriented (versus privately-oriented) consumption situation. Thus, the intercept  $\eta$  may be modeled as:

$$\eta = f(u, s) \text{ with } \partial\eta/\partial u < 0 \text{ and } \partial\eta/\partial s > 0 .$$

The upward shift of the demand curve from  $D_0$  to  $D_1$  also reflects an unmet demand  $\Delta Q_H$  at the price level  $P_0$ . Both  $\Delta P_H$  and  $\Delta Q_H$  are indicators of the product's increased desirability due its exclusivity. The price premium  $\Delta P_H$  and the unmet demand  $\Delta Q_H$  are related as follows:

$$\Delta P_H = \Delta Q_H b_1 \tag{4}$$

## 2.2 Transfer of Exclusivity Goodwill

In order to transfer exclusivity goodwill down the product line, the firm needs to have relatively strong associations between the limited edition product  $H$  and products that are lower in the brand line (i.e.  $L$ ). Such associations may stem from a shared brand name or may be produced by marketing mix linkages that are created for a strategic purpose. We hypothesize that this association will result in the transfer of some of  $H$ 's exclusivity goodwill to  $L$ . This transfer of exclusivity goodwill makes the lower end product more desirable and increases its demand relative to its normal baseline level. We model this incremental demand due to the transfer of exclusivity goodwill as  $\Delta Q_L$ , where:

$$\Delta Q_L = \gamma \Delta Q_H \tag{5}$$

where  $\gamma$  is the exclusivity transfer multiplier,  $\gamma > 0$ .

The parameter  $\gamma$  controls the extent to which status symbolism transfers from the limited edition product H, to its lower end counterpart in the line, L. This parameter may be seen as reflecting the strength of association between H and L. It is specific to the brand and is determined by the perceptions of L's customers regarding the social distance between them and the group(s) identified as the customers of H. For the purposes of this study, we hold fixed the social distance and hence treat  $\gamma$  as a constant.

The constrained supply of the limited edition product results in some revenue loss, but incremental revenues are also gained from the upward shift in demand for the lower end item due to the exclusivity transfer. This sets up the optimization problem. The manager must jointly determine the supply level and the price for the limited edition product as well as the price of the lower end counterpart that maximize total profits. We consider two cases. In the first, the price  $P_L$  in the lower-end market is fixed due to market conditions. In the second case, the firm can manipulate both the price and the quantity of the lower end product.

### 2.3 Case 1: Exogeneous Lower-End Market Price

We assume in this case that the price  $P_L$  in the lower end market is exogeneously fixed by market conditions. This



would be true in a highly competitive market where individual producers cannot directly affect the market price. As a result, the firm has little latitude in terms of the price that it can set. The manager's problem then is to select the optimal level of supply  $Q_H$  for the limited edition product that maximizes aggregate profits in both markets. The maximization problem is:

$$\text{Max}_{Q_H} \Pi = P_H(Q_H) - C_H(Q_H) Q_H + [P_L(Q_L + \gamma \Delta Q_H) - C_L(Q_L + \gamma \Delta Q_H)] [Q_L + \gamma \Delta Q_H] \quad (6)$$

subject to  $Q_H \geq 0$ .

For constant unit costs  $C_H$  and  $C_L$ , and a linear demand curve the maximization can be expressed as:

$$\text{Max}_{Q_H} \Pi = [a_1 - b_1 Q_H - C_H] Q_H + [P_L - C_L] [Q_L + \gamma \Delta Q_H] \quad (7)$$

Substituting for  $\Delta Q_H$  using equations (2) and (4) we get:

$$\text{Max}_{Q_H} \Pi = (a_1 - b_1 Q_H - C_H) Q_H + [P_L - C_L] \{Q_L + \gamma [\eta - a_1 - Q_H (\zeta - b_1)] / b_1\} \quad (8)$$

The optimal supply for the limited edition brand H is obtained by setting

$\partial \Pi / \partial Q_H = 0$  and solving for  $Q_H^*$ . We get:

$$Q_H^* = [a_1 - C_H] / 2b_1 + [P_L - C_L] \gamma [1 - \zeta / b_1] / 2b_1 \quad (10a)$$

or by substituting  $\zeta$  with  $\eta$  using equation (3):

$$Q_H^* = [a_1 - C_H] / 2b_1 + [P_L - C_L] \gamma [1 - \eta / a_1] / 2b_1 \quad (10b)$$

The first term  $[a_1 - C_H] / 2b_1$  is the optimal quantity for a monopolist operating only in the upper end market. However,

this is not the optimal quantity if we consider both markets simultaneously. The second term  $[P_L - C_L]\gamma[1 - \eta/a_1]/2b_1$  is negative since  $\eta > a_1$ . It represents the extent of the deliberate supply restriction that the firm imposes relative to the monopolist's optimal supply in the high end market so as to maximize profits in both markets.

Notice that  $\partial Q_H^*/\partial \eta < 0$ , implying that, *ceteris paribus*, the greater the potential price premium in the secondary market, the more the firm must restrict the supply of the limited-edition product to maximize profits. Since the potential price premium is reflected by the intercept  $\eta$ , and  $\eta$  depends on the consumption situation characteristics ( $\eta = f(u, s)$ ), we get  $\partial Q_H/\partial u > 0$  and  $\partial Q_H/\partial s < 0$ , implying that, *ceteris paribus*, the more utilitarian (versus symbolically motivated) the consumption situation, the less the firm must restrict the supply of the limited-edition product. By a similar logic, the more public (versus private) the consumption situation, the greater the supply restriction the firm must impose for the limited-edition product other things being equal.

In addition we have  $\partial Q_H/\partial \gamma < 0$ , which indicates that the greater the exclusivity transfer multiplier, the more the firm must restrict the supply of the limited edition brand to maximize profits, other things being equal. Similarly,  $\partial Q_H/\partial P_L < 0$ , i.e. the higher the price for the low end brand,

the greater the need to restrict the supply of the limited edition brand. Finally,  $\partial Q_H / \partial C_L > 0$  implies that the greater the cost of the low end item, the greater the supply of the limited edition brand.

#### 2.4. Case 2: Endogeneous Lower-End Market Price

We now consider the case where price in the lower end product market is not fixed exogeneously, but the lower end product faces the following price-demand curve:  $P_L = a_2 - b_2 Q_L$ . The optimization problem is to determine simultaneously the optimal supply levels  $Q_H^*$ , and  $Q_L^*$  for both the upper end and the lower end products so as to maximize total profits. This maximization problem is:

$$\text{Max}_{Q_H, Q_L} \Pi = [P_H(Q_H) - C_H]Q_H + [P_L(Q_L + \gamma \Delta Q_H) - C_L][Q_L + \gamma \Delta Q_H]. \quad (11)$$

$$\text{subject to: } Q_H \geq 0, \text{ and } Q_L \geq 0$$

Supply restrictions in the high end market are postulated to have the same effects as before, with  $\Delta Q_H$  representing the extent of supply restriction of brand H relative to its normal demand level. We assume that the unit costs  $C_H$ , and  $C_L$  are constant, independent of each other, and are unaffected by production levels. This simplifies the solution without compromising the basic conceptual insights. The transfer of exclusivity goodwill from H to L results in an upward shift in the demand curve of L. This shift is:

$$\Delta P_L = \gamma \Delta P_H = \gamma \Delta Q_H b_1 \quad (12)$$

Thus, the equation for price-demand in the lower end market after the goodwill transfer is:

$$P_L = a_2 + \gamma \Delta P_H - b_2 Q_L \quad (13)$$

where the term  $a_2 + \gamma \Delta P_H$  is the new intercept.

Substituting for  $P_L$  in (11) with equations (13), (2), and (4), we get:

$$\begin{aligned} \text{Max } \Pi &= (a_1 - C_H - b_1 Q_H) Q_H + \{a_2 - C_L + \gamma[\eta - a_1 - Q_H(\zeta - b_1)] - b_2 Q_L\} Q_L \\ (14) \\ Q_H, Q_L \end{aligned}$$

By setting

$$\partial \Pi / \partial Q_H = a_1 - C_H - 2b_1 Q_H - Q_L(\zeta - b_1)\gamma = 0 \quad (15)$$

$$\partial \Pi / \partial Q_L = a_2 - C_L + \gamma[\eta - a_1 - Q_H(\zeta - b_1)] - 2b_2 Q_L = 0 \quad (16)$$

and by solving for  $Q_H$  and  $Q_L$ , we get the optimal supply for the upper end market  $Q_H^*$ :

$$Q_H^* = (a_1 - C_H) / 2b_1 - Q_L \gamma (\zeta - b_1) / 2b_1 \quad (17a)$$

or by substituting  $\zeta$  with  $\eta$  using equation (3):

$$Q_H^* = (a_1 - C_H) / 2b_1 - Q_L \gamma (\eta / a_1 - 1) / 2 \quad (17b)$$

The first term is the monopolist's optimal supply under no exclusivity goodwill transfer. As in the previous case, the second term is negative and determines the number of units by which the firm must restrict the supply of H in the upper end market relative to the monopolist's optimal supply in order to reap the optimal benefits given the transfer of exclusivity goodwill from H to L. As in the previous case,

$\partial Q_H^*/\partial \gamma < 0$ , indicating that the greater the exclusivity transfer parameter  $\gamma$ , the greater the degree to which the firm must restrict the supply of the upper end product.

Similarly,  $\partial Q_H^*/\partial \eta < 0$  indicating that the greater the potential price premium, the more the firm must restrict the supply of the upper end product H. Also, as in the previous case of a fixed lower-end product price,  $\partial Q_H^*/\partial u > 0$ , indicating that the more utilitarian (versus symbolically motivated) the consumption situation, the lower the extent of restriction on the supply of the limited-edition product. Similarly, since  $\partial Q_H^*/\partial s < 0$ , the more public (versus private) the consumption situation the more the firm should restrict the supply of the limited-edition product.

Equation (17) also shows the relationship between the two optimal supply levels for both markets. Thus, since  $\partial Q_H^*/Q_L^* < 0$ , as the optimal supply for the lower end market goes up, the optimal supply for the upper end market goes down. The optimal supply level for the lower end market is determined by solving equations (15) and (16). Expressed in terms of  $\eta$ ,  $Q_L^*$  is given by:

$$Q_L^* = [2b_1(a_2 - C_L) + \gamma b_1(\eta/a_1 - 1)(a_1 + C_H)] / [4b_1b_2 - \gamma^2b_1^2(\eta/a_1 - 1)^2] \quad (18)$$

with  $\partial Q_L^*/\partial \gamma > 0$  indicating that the greater the exclusivity transfer multiplier, the greater is the optimal supply level for the lower end brand.

We can also see that  $\partial Q_L^*/\partial \eta > 0$  indicating that the greater the potential price premium, the higher the firm must set supply level for the lower-end product. Since  $\eta = f(u, s)$ , we have  $\partial Q_L^*/\partial u < 0$  and  $\partial Q_L^*/\partial s > 0$ . This indicates that, ceteris paribus, the more utilitarian (versus symbolically motivated) the consumption situation, the lower the optimal supply level for the lower-end product. However, the more public (versus private) the consumption situation, the higher the optimal supply level for the lower-end product.

## 2.5 Hypotheses for Empirical Tests

The normative models developed in the previous section are predicated as a set of behavioral assumptions regarding the nature of exclusivity phenomena. We assume that the more restricted the supply of the limited edition product, the greater the unmet demand  $\Delta Q_H$  and hence, the greater its perceived exclusivity as reflected in the price premium  $\Delta P_H$ . Hence, for a given value of  $\gamma$ , the lower the supply of the upper end product  $Q_0$ , the higher the exclusivity transfer to the lower end product. Since the value of the normative model rests on the validity of the behavioral assumptions, we state them as formal hypotheses and test them empirically.

The baseline hypothesis states that limited supply of a product in an upper level market at will increase preference for a product at a lower level in the same brand

line. Using H and L to denote the upper and lower end products respectively, we have:

H1: L will have a significantly greater demand when the supply of H is limited compared to the case where the supply of H is not limited.

As discussed previously, the literature (e.g. Bearden and Etzel 1982), suggest that the exclusivity of the limited-edition product as reflected by the price premium  $\Delta P_H = f(u, s)$ , is expected to vary depending on a number of factors related to the consumption situation. These factors, in turn, will affect the magnitude of the exclusivity goodwill  $\Delta Q_L$  transferred to the lower end brand.

The first factor is the consumption motivation, conceptualized in terms of being utilitarian (i.e. functional) versus symbolically motivated. As discussed previously, consumption situations where the underlying motivation is utilitarian are unlikely to support significant exclusivity transfer relative to situations where the consumption is symbolically motivated. Consequently, exclusivity transfer and demand for the low-end product in the brand extension is expected to be greater under symbolic versus functional motivation.

H2: When the supply of H is limited, the exclusivity goodwill transfer to L and the consequent increase in demand for L will be significantly greater when the consumption purpose is more symbolically than functionally motivated.

The second factor is the visibility of the consumption activity conceptualized in terms of a public versus private consumption situation. The transfer of exclusivity goodwill is expected to be higher when the consumption occurs more publicly than more privately. Although individual differences in proclivity for conspicuous consumption may moderate this effect, exclusivity transfer and demand for the lower end brand extension expected to be greater when the consumption situation is more public versus private. Thus:

H3: When the supply of H is limited, the exclusivity goodwill transfer and consequently the demand for L will be significantly greater when the consumption situation is more public than when it is more private.

The literature does not speak to the issue interaction effects between consumption motivation and consumption situation. However, we believe that an ordinal interaction may be likely such that for the low end brand extension, the



difference in exclusivity transfer and demand between public and private consumption situation is greater when the consumption motivation is symbolic versus functional. We test for this possibility in the empirical work. The next chapter presents the details of the experiment conducted to test these hypotheses formally.

### 3. EXCLUSIVITY TRANSFER FOR LIMITED EDITION PRODUCTS:

#### AN EXPERIMENTAL INVESTIGATION

#### 3.1 Experimental Design

The baseline hypothesis (H1) presented in Chapter 2 postulated that the demand for a low end product in a brand line will be greater when a high end product in the line is in limited (versus unlimited) supply. This was predicated under the assumption that supply limitations create a perception of exclusivity for the high end product that then transfer to the low end product through brand name association. Two additional hypotheses were also offered regarding the extent of exclusivity transfer to and demand for the lower end brand, as a function of consumption motivation and consumption situation. In this chapter we describe how these three hypotheses are tested experimentally. A three factor, between subjects design is used and the study is replicated for two products, watches and wine. The three factors and their respective levels are: supply, (limited versus unlimited) of the upper-end brand; consumption motivation (functional versus symbolic); and consumption situation (private versus public).

Subjects were asked to participate in a situation involving the selection and purchase of a gift for a sibling

(watch) or a colleague (wine). The recipients' persona were described in the scenario which also embedded cues designed to manipulate consumption motivation (functional versus symbolic). The description of the usage situation was also manipulated to suggest either private or public consumption of the gift.

The subjects' primary task involved the choice of a brand from among a set of four products AL and AH, and BL and BH. AH and BH were the upper end products of brands A and B, and AL and BL were the respective lower end counterparts. Initially, subjects examined product descriptions designed to suggest that the two products at each level had equivalent quality and price. However, in the decision task, subjects were told that due to budget limitations they could not afford products AH or BH, and that they would have to choose from the lower end products AL or BL. In the treatment conditions, AH was described as a limited edition product whereas BH had no supply limitations. Watches and wine were used as the two stimulus product categories for the study.

#### Watches

For the watch category over 50 watch print advertisements in newspapers and magazines were used to generate a list of key watch attributes. Using this list, the descriptions of the four watches were developed keeping the quality and price of the two products about equal at each

level, e.g. the high end (AH and BH) and the lower end extension (AL and BL).

The descriptions were organized such that the two products in each brand line were presented together. Two fictitious brand names, Pheoton and Nigiren, were used. The subjects were told in the written instructions that the descriptions were based on real products (see Background in Appendix A) but that the names were fictitious. For each brand line, the product description started with a general statement about the watch company, its history and tradition. Thereafter, the high end watch was described (AH = Pheoton Monarch and BH = Nigiren Royale), followed by the lower end watch description (AL = Pheoton Chronometer and BL = Nigiren Timestar; Appendix B). The products in each brand line were presented together so as to induce the subjects to think in terms of brand names across products as opposed to individual watches. This is consistent with the way companies promote limited supply high end products.

Each stimulus product was pretested to determine its baseline attractiveness relative to the other branded product at the corresponding line level (e.g. AH versus BH and AL versus BL). Ideally, we wanted the stimuli at their respective line levels to be equally attractive, (e.g. AH = BH and AL = BL). Two attractiveness measures were used. First, subjects rated the overall desirability of AH relative

to BH and of AL relative to BL using seven point scales (1 = less desirable and 7 = more desirable). Second, subjects allocated 100 points between AH and BH (and between AL and BL) so as to reflect their relative likelihood of purchasing them.

Thirty-seven business undergraduates (24 seniors and 13 juniors) at a southwestern university in the southwest participated in the pretests. The group consisted of 24 males and 13 females with an average age of 22.6 years. Table 1 summarizes the outcomes of the pretests (LKPR = purchase likelihood, and DES = desirability of Pheoton relative to the Nigiren).

TABLE 1: Stimuli Pretests

	<u>High end</u>		<u>Low end</u>	
	Pheoton Monarch (AH)	Nigiren Royale (BH)	Pheoton Chronometer (AL)	Nigiren Timestar (BL)
LKPR	47.17	52.83	43.56	56.47
DES	4.56		4.59	

The data suggest that the two high end and low end products are fairly close in terms of attractiveness. The Pheoton Monarch was designated as the limited-supply product. A passage mentioned that only 300 of them were produced and the phrase "limited edition" was added in front of the

Pheoton Monarch name every time it was mentioned (see Appendix C). The description of the comparison product in the Nigiren line remained the same as in Appendix B.

Four consumption settings were created by crossing the two levels of the consumption motivation factor (functional and symbolic) with the two levels of the consumption situation factor (private and public). In one other condition (control), no explicit description was provided of the consumption situation and the consumption situation. The general scenario was the same across all treatment conditions. The gift recipient was described as the subjects' brother who is a jogger who runs every day and would value a watch that he could use during his runs.

Consumption motivation was manipulated by describing the role of the watch in projecting the recipient's self image as either a person of good, refined taste (symbolic motivation) or as a serious athlete (functional motivation). Consumption situation was manipulated by describing the nature of the recipient's running, e.g. solitary runs (private situation) versus runs with his colleagues (public situation). In the private situation, the self image was reinforced to himself, whereas in the public situation, the self image was projected to his colleagues. Appendix D provides the task instructions for all four treatment conditions and the control.

Wine

The experiment was replicated using wines as a second stimulus category. Over 100 wine descriptions from the Wine Spectator and reviews from the New York Times were used to generate a list of key wine attributes. Using this list, descriptions were developed for four wines, two at the high end (AH and BH) and the two at the lower end (AL and BL). Two fictitious winery names, (Cleos Estate Winery and Chateau Adele Winery) were used. The subjects were told that the descriptions were based on real products, but that the actual brand names were fictitious (see Appendix A). For each brand, the product descriptions started with a general statement about the winery, its history and tradition. Then, the high end wine was described (AH = Chateau Adele Cabernet Sauvignon and BH = Cleos Estate Cabernet Sauvignon), followed by a description of the lower end wine (AL = Chateau Adele Merlot and BL = Cleos Estate Merlot) in the brand line (see Appendix E). As with the watches, the format was designed to induce the subjects to think in terms of brand names across products as opposed to individual wines.

The wine stimuli were pretested using the same format as for the watches. Twenty-one business undergraduates (12 seniors and 9 juniors) at a southwestern university participated in the pretests (12 males and 9 females, average age of 22.1 years). As Table 2 shows, the two products at

each end were approximately equivalent in attractiveness.

TABLE 2: Stimuli Pretesting

	<u>High end</u>		<u>Low end</u>	
	Chateau Adele Cabernet Sauvignon (AH)	Cleos Estate Cabernet Sauvignon (BH)	Chateau Adele Merlot  (AL)	Cleos <del>Estate</del> <del>Merlot</del>  (BL)
LKPR	53.3	46.7	47.6	52.4
DES	4.14		4.23	

Appendix E shows the descriptions of the four wine products. The Chateau Adele Cabernet Sauvignon was designated as the limited supply product. Subjects in the treatment groups were told that only 4800 bottles of the wine had been produced and the phrase "limited edition" was placed before the Chateau Adele Cabernet Sauvignon name every time it was mentioned (Appendix F). The description of the Cleos Estate line remained the same (Appendix E).

The four consumption settings were formed by crossing the two levels of the consumption motivation factor (functional and symbolic) with the two levels of the consumption situation factor (private and public). The general scenario was the same across all treatment conditions. The gift recipient is the subjects' colleague and is a bachelor who lives by himself, is an accomplished cook



and enjoys wine with dinner.

Consumption motivation was manipulated by describing the wine's role in reinforcing the recipient's self image as either a person of good, refined taste (symbolic motivation) or as a competent, performance-oriented person (functional motivation). Consumption situation was manipulated by describing the recipient's circumstances surrounding the dining, i.e. dining alone (private situation) versus throwing a large dinner party (public situation). In the private situation, the self image was reinforced to himself, whereas in the public situation, the self image was projected to his dinner guests. As before an additional control group omitted these descriptions. Appendix G provides the task instructions for the four treatment conditions and the control group.

### 3.2 Measurements

#### Dependent variables:

Three dependent variables measured relative attractiveness for the lower end brands AL and BL:

(a) perceived overall relative desirability (DES) on a seven point scale (1 = less desirable and 7 = more desirable)

(b) likelihood of purchase (LKPR) by allocating 100 points among the alternatives

(c) choice (CH) (see questions 1-3 and 10-12 in Appendix H for watches and Appendix I for wine)

Independent variables and manipulation checks:

The following manipulation checks were used:

(a) The supply limitation manipulation was checked using 7-point scale measures that compared perceptions of availability restrictions (AVAL) and difficulty-to-obtain (DOBT) for each pair of high end and low end products (see questions 19-22 in Appendix H for watches and in Appendix I for wine).

(b) The functional versus symbolic motivation manipulation is checked using 7-point Likert scale measures of the nature of the values perceived by the gift recipient for each product category. For watches, the functional values were accurate timekeeping ability (ACCUR), and functionality (FUNCT). The symbolic values measured were the ability to project an image of good taste (IMAGE), as well as styling and appearance (STYLE). An additional item directly measured the value of the watch for its objective versus image properties. For wines, the functional value measures were its compatibility with simple tasty dishes (COMSIM), and flavor and drinkability (FLAVOR). The symbolic value measures were its compatibility with exotic dishes (COMEX), and its ability to project an image of refined taste (REF). An additional item directly measured the wine's value for its objective versus image properties (OBJIMA) (see questions 23-26 and 32 in Appendix H for watches and Appendix I for wine).

(c) The consumption situation manipulation was checked using 7-point Likert scale measures of the gift recipient's likelihood of showing (SHOW) and talking about (TALK) the gift with his friends. Other measures examined the likelihood that the gift will be consumed inconspicuously (INCSP), while the recipient is alone (ALONE), and in public versus private situations (PUPR) (see questions 27-31 in Appendix H for watches and Appendix I for wine).

Mediator variables:

Symbolic and functional perceptions were expected to mediate the relationship between supply limitations and relative attractiveness. These mediators were measured using 7-point scales (see questions 4-6 and 13-15 in Appendix H for watches and in Appendix I for wine). The symbolic perceptions were:

- (a) relative brand exclusivity (EXCL)
- (b) relative brand prestige (PREST)
- (c) relative ability of the brand to function as a status symbol (STAT).

The functional perceptions were:

- (a) relative quality (FEAT) of brand features
- (b) relative overall brand quality (QUAL)
- (c) relative product performance (PERF) for watches, and relative product satisfaction (SATIS) for wine.

### 3.3. Results

As described above, the experiment contained five cells. In four of these cells, the product was indicated to be in limited supply. These four cells also embedded a 2x2 manipulation of consumption motivation and consumption situation. The fifth (control) cell, was one in which no statements were made about the consumption motivation and the consumption situation. In addition, the statement about the product being in limited supply was omitted. Thus, the five study cells may be labelled as:

- (1) Control (No statements regarding limited supply, consumption motivation, or consumption situation).
- (2) Limited Supply, Functional Consumption Motivation, Private Consumption Situation).
- (3) Limited Supply, Symbolic Consumption Motivation, Private Consumption Situation).
- (4) Limited Supply, Functional Consumption Motivation, Public Consumption Situation).
- (5) Limited Supply, Symbolic Consumption Motivation, Public Consumption Situation).

The absence of consumption motivation and consumption situation statements in the control group was treated as equivalent to the average of the four treatment conditions in which consumption motivation and consumption situation were manipulated, we may conduct tests of the main effects

of limited supply by a contrast between relative attractiveness measures in the control cell and the pooled relative attractiveness measures in the four treatment cells.

To test the effects of supply limitation between the symbolic and functional consumption situation, we pool cells 2 and 4 and compare their means to those of cells 3 and 5. This of course assumes that the supply limitation effect is common across the settings that were pooled in conducting this contrast.

To test the effects of supply limitation between the public and private consumption situation, we pool cells 4 and 5 and cells 2 and 3, and we contrast their means. This of course assumes that the supply limitation effect is equivalent in the settings that were pooled in conducting this contrast.

The interaction effect is tested within the four treatment (supply limitation) cells 2,3,4, and 5. This too depends on similar assumptions as for hypotheses 2 and 3, i.e. that the supply limitation factor does not directly interact with either one or both of the consumption motivation and consumption situation factors.

#### 3.3.1. Manipulation Checks

A total of 234 business students from two universities, (one northeastern and the other southwestern) participated in the study. There were 116 participants in the watch study

(56 males, 57 females, 3 non-responses to the gender question; mean age 25.2 years) and 118 participants (56 males, 57 females, 5 non-responses to the gender question; mean age 24.2 years) in the wine study.

Subject' perceptions of task and stimulus realism were measured on four 7-point Likert scales. The four questions (numbers 33-36 in Appendix H for watches and in Appendix I for wine) measured the realism of the stimulus descriptions (DESCR), and the gift situation (SITUA), the interest value the study scenario (INTER), and the adequacy of the description of the recipient's brother's/colleague's (ADEQUAT). The scales were anchored by 1 (less interesting, less realistic, etc.) and 7 (very interesting, very realistic, etc.).

Table 3 summarizes the scores for both stimuli.

TABLE 3: Task Description Measures

	<u>Watches</u>	<u>Wine</u>
DESCR	4.75	4.54
SITUA	5.27	5.43
INTER	4.31	4.24
ADEQUAT	4.53	4.60

Mean scores above 4.0 indicate that the subjects regarded the choice scenarios and stimuli descriptions in

both studies as reasonably realistic and interesting. The ratings were stable across the different treatment conditions for both product categories.

The control group condition stated no supply limitation for AH (Chateau Adele Cabernet Sauvignon and Pheoton Monarch for wine and watches respectively), whereas subjects in the four treatment groups were told that their products had supply limitations. The manipulation is checked by comparing the control and the four treatment groups on their scores (MANOVA procedure) for the supply limitation measures (AVAL) and (DOBT).

TABLE 4: Limited Supply Manipulation Check for Watches

	<u>Wilks' Lambda</u>
	Pr>F
-----	
Cell 2: Functional/Private	0.0116
Cell 3: Symbolic/Private	0.0034
Cell 4: Functional/Public	0.0153
Cell 5: Symbolic/Public	0.0306

TABLE 5: Limited Supply Manipulation Check for Wine

	<u>Wilks' Lambda</u>
	Pr>F
-----	
Cell 2: Functional/Private	0.0038
Cell 3: Symbolic/Private	0.0012
Cell 4: Functional/Public	0.0024
Cell 5: Symbolic/Public	0.0001

These results show that the subjects consistently perceived that the supply of the target product (AH) was more restricted in each one of the four treatment groups relative to the control group.

The second factor is the distinction between symbolic versus functional consumption motivation. The values for the five symbolic/functional measures for watches are marginal (Wilks' Lambda  $F = 1.6294$ ,  $Pr>F = 0.1614$ ). The problem seems to be with the measures of the relative importance of timekeeping ability (ACCUR) ( $Pr>F = 0.7793$ ) and function (FUNCT) ( $Pr>F = 0.5835$ ). These two measures describe attributes such as good functional features and accuracy in timekeeping which can be considered essential in a watch regardless of the actual usage motivation. Thus, they may not be sensitive enough to measure the underlying consumption motivation. By eliminating them and using the remaining three measures for the watches we get significant results (Wilks'



Lambda  $F = 2.6909$ ,  $Pr > F = 0.0514$ ) for the consumption motivation manipulation check. The results for the five functional/symbolic measures for wine (Wilks' Lambda  $F = 5.3145$ ,  $Pr > F = 0.0003$ ) indicate that the subjects perceived that the consumption motivation was different between the two descriptions.

The third factor is the distinction between public and private consumption situations. The results for the five public/private measures for the watches (Wilks' Lambda  $F = 6.9132$ ,  $Pr > F = 0.0001$ ) as well as for wine (Wilks' Lambda  $F = 9.3948$ ,  $Pr > F = 0.0001$ ) indicate that the subjects perceived the public-private distinction between the two consumption situations.

### 3.3.2 Hypothesis Tests

As indicated in our conceptual development (Chapter 2), we expect limited supply of the high-end product in the brand line to create exclusivity and status perceptions for the brand. This status perception would transfer to the lower end product in the line, enhancing its relative attractiveness. Thus, a conceptually complete test needs to examine not only whether supply limitations enhanced relative attractiveness of the corresponding lower end product but also whether the increased attractiveness was mediated by exclusivity perceptions. Furthermore, one needs to examine and discard

an alternative hypothesis that supply limitations enhance perception of functional quality which, in turn, influences relative attractiveness. The three exclusivity measures showed significant intracorrelations as did the three measures of functional quality. These correlations are shown in tables 6a and 6b for watches and 7a and 7b for wine.

TABLE 6a: Correlation Matrix of Exclusivity

<u>Measures for Watches</u>			
	EXCLUSIVITY	PRESTIGE	STATUS
EXCLUSIVITY	-		
PRESTIGE	0.5250	-	
STATUS	0.5257	0.6283	-

TABLE 6b: Correlation Matrix for Functional Quality

<u>Measures for Watches</u>			
	FEATURES	QUALITY	PERFORMANCE
FEATURES	-		
QUALITY	0.6869	-	
PERFORMANCE	0.7102	0.6409	-

TABLE 7a: Correlation Matrix of Exclusivity Measures for Wine

	EXCLUSIVITY	PRESTIGE	STATUS
EXCLUSIVITY	-		
PRESTIGE	0.4089	-	
STATUS	0.3908	0.6021	-

TABLE 7b: Correlation Matrix for Functional Quality

	<u>Measures for Wine</u>		
	FEATURES	QUALITY	SATISFACTION
FEATURES	-		
QUALITY	0.5977	-	
SATISFACTION	0.7456	0.6931	-

The measures were subjected to a principal component analysis to extract factors corresponding to the exclusivity and functional quality mediators separately for watches and wine. The first principal component extracted for each product was then used as an indicator of the corresponding mediator variable. The percent of variance explained by each of the four principal components is shown in table 8.

TABLE 8: Percent of Variation Explained by

	<u>Principal Component</u>	
	Watches	Wine
Exclusivity	0.707	0.647
Functional Quality	0.787	0.786

Before we test the hypotheses, we summarize the means of all three attractiveness measures for all cells for both

products watches and wine. We also summarize the means of the four treatment cells, as well as the means for the pooled cells that capture the two conditions of consumption motivation (symbolic and functional) and the cells that capture the two conditions for the consumption situation (public and private). Table 9a displays the summary of the means for watches, and Table 9b for wine.

TABLE 9a: Means of the Attractiveness Measures for Watches

Cell	DES	DPNT	Choice	
			AL	BL
1: Control	3.428	-24.666	10	11
2: Functional/Private	3.681	-20.64	6	16
3: Symbolic/Private	4.434	14.086	18	5
4: Functional/Public	4.185	-6.298	13	14
5: Symbolic/Public	4.772	25.908	18	4
Cells 2-5	4.265	2.872	55	39
Cells 2 and 4 (functional)	3.933	-13.466	19	30
Cells 3 and 5 (symbolic)	4.603	19.998	36	9
Cells 2 and 3 (private)	4.058	-3.274	24	21
Cells 4 and 5 (public)	4.478	9.806	31	18

TABLE 9b: Means of the Attractiveness Measures for Wine

Cell	DES	DPNT	Choice	
			AL	BL
1: Control	3.994	-9.244	7	11
2: Functional/Private	3.750	-7.00	8	16
3: Symbolic/Private	4.564	18.75	16	5
4: Functional/Public	4.857	16.667	16	8
5: Symbolic/Public	5.254	31.2	21	4
Cells 2-5	4.591	12.636	61	37
Cells 2 and 4 (functional)	4.375	4.416	24	24
Cells 3 and 5 (symbolic)	4.940	25.60	37	9
Cells 2 and 3 (private)	4.255	6.500	24	21
Cells 4 and 5 (public)	5.060	23.516	37	12

We begin by testing the main effects hypotheses on each one of the three dependent variables. The three dependent variables are overall desirability of AL relative to BL (DES), relative likelihood of purchase of AL to BL expressed as the difference in the 100 point allocation between AL and BL (DPNT = points for AL - points for BL), and the number of subjects choosing AL and BL (CH). For example, when testing the effects of limited supply on relative desirability, the model is:

$$DES = f(\text{limited supply}).$$

The second step is to examine whether the exclusivity has a direct effect on the relative attractiveness measures. This is done by regressing the exclusivity principal component on the corresponding attractiveness measure. For example, when testing the effects of the exclusivity mediator (EXWA) on relative desirability for watches, the model is:

$$DES = f(EXWA).$$

The third step tests for the hypothesized mediation of symbolic perceptions by exclusivity. The hypothesis test in step 1 is repeated, incorporating the exclusivity principal component as an independent variable in the regression. For example, for the desirability measure in hypothesis 1 for watches the model is:

$$DES = f(\text{limited supply}, EXWA).$$

This test is only meaningful if both effects have been found to be significant on their own in steps 1 and 2. If the effects of limited supply are not significant in this model, but the effects of the exclusivity mediator are, then we conclude that the limited supply effect is fully mediated by the exclusivity perceptions. If the effects of limited supply are significant even in the presence of the exclusivity mediator, we conclude that the effects of limited supply are partially mediated by exclusivity perceptions.

Step four is similar to step 2, the difference being that we now test for the effects of the functional quality

mediator on attractiveness. This is done by regressing the functional quality principal component on the corresponding attractiveness measure. For example, for the desirability measure for watches the model is:

$$DES = f(FQWA).$$

Finally, step 5 is a test for hypothesis effects with mediation of functional quality perceptions. It is identical to step 3 except that functional quality perceptions are tested as the mediator rather than the exclusivity perceptions. The model for desirability in hypothesis 1 for watches is:

$$DES = f(\text{limited supply}, FQWA).$$

We follow the above five steps for each hypothesis first with watches and then with wine. This section presents only the results of the tests and the conclusions in terms of the main and mediating effects. The discussion of these results follows in section 3.4.

#### H1 Tests for Watches

We tested for the effects of limited supply by contrasting between relative attractiveness measures in the control cell and the pooled relative attractiveness measures in the four treatment cells. The effect of limited supply on relative desirability (DES) was significant ( $F = 6.62$ ,  $df = 1, 113$ ,  $Pr > F = 0.0114$ ). In step 2 we tested for the effects

of exclusivity mediators (EXWA) on desirability and we found them significant ( $F = 46.81$ ,  $df = 1, 113$ ,  $Pr > F = 0.0001$ ). In step 3 we looked for the effects of limited supply with the exclusivity mediator. The effect of limited supply on DES was not significant ( $F = 1.67$ ,  $df = 1, 110$ ,  $Pr > F = 0.1989$ ), but that of EXWA was significant ( $F = 32.53$ ,  $df = 1, 110$ ,  $Pr > F = 0.0001$ ). Thus, we concluded that the effect of limited supply on desirability was fully mediated by exclusivity perceptions.

In step 4 we looked for the effect of functional quality perceptions (FQWA) on desirability, and found it significant ( $F = 46.57$ ,  $df = 1, 110$ ,  $Pr > F = 0.0001$ ). In step 5 we looked for the effect of limited supply with the functional quality mediator included in the analysis. The effect of limited supply on DES was significant ( $F = 5.71$ ,  $df = 1, 110$ ,  $Pr > F = 0.0185$ ). FQWA was also significant ( $F = 55.82$ ,  $df = 1, 110$ ,  $Pr > F = 0.0001$ ). Thus, we concluded that the effect of limited supply on desirability was partially mediated by functional quality perceptions.

We repeated the same process for the likelihood of purchase (DPNT) measure. The effect of limited supply on DPNT was significant ( $F = 7.16$ ,  $df = 1, 113$ ,  $Pr > F = 0.0086$ ). The effect of exclusivity perceptions on DPNT was also significant ( $F = 35.17$ ,  $df = 1, 113$ ,  $Pr > F = 0.0001$ ).

We then examined the effects of limited supply with the



exclusivity mediator included in the analysis. The effects of limited supply on DPNT were not significant ( $F = 2.4$ ,  $df = 1,110$ ,  $Pr > F = 0.1244$ ), but those of EXWA are ( $F = 29.34$ ,  $df = 1,110$ ,  $Pr > F = 0.0001$ ). Thus, we conclude that the effect of limited supply on likelihood of purchase was fully mediated by exclusivity perceptions.

Next, we looked for the effects of functional quality perceptions (FQWA) on DPNT, and we found them significant ( $F = 39.12$ ,  $df = 1,110$ ,  $Pr > F = 0.0001$ ). In step 5 we looked for the effects of limited supply with the functional quality mediator included in the analysis. The effect of limited supply on DPNT was significant ( $F = 5.75$ ,  $df = 1,110$ ,  $Pr > F = 0.0182$ ), and that of FQWA was significant too ( $F = 57.97$ ,  $df = 1,110$ ,  $Pr > F = 0.0001$ ). Thus, we concluded that the effect of limited supply on likelihood of purchase was partially mediated by functional quality perceptions.

Finally, limited supply had little effect on the choice measure (CH). The effects are not significant (Chi-Square = 0.82,  $df = 1$ , Prob = 0.3648). The lack of support for hypothesis 1 for the choice measure eliminates the need for testing mediating effects.

#### H1 Tests for Wine

We tested the effect of limited supply on the attractiveness measures for wine using the same approach as

in the watch study. The effect of limited supply on DES was significant ( $F = 3.77$ ,  $df = 1,114$ ,  $Pr > F = 0.0546$ ). The effect of exclusivity perceptions on DPNT were also significant ( $F = 31.17$ ,  $df = 1,114$ ,  $Pr > F = 0.0001$ ).

We then looked for the effects of limited supply with the exclusivity mediator. The effect of limited supply on DES was not significant ( $F = 3.15$ ,  $df = 1,111$ ,  $Pr > F = 0.0788$ ). However, since EXWI remained significant ( $F = 38.38$ ,  $df = 1,111$ ,  $Pr > F = 0.0001$ ), we concluded that the effects of limited supply on desirability are fully mediated by exclusivity perceptions.

In the next step we looked for the effect of functional quality perceptions (FQWI) on DES. This effect was significant ( $F = 96.47$ ,  $df = 1,111$ ,  $Pr > F = 0.0001$ ). In step 5 we looked for the effect of limited supply with the functional quality mediator. The effect of limited supply on DES was significant ( $F = 6.35$ ,  $df = 1,111$ ,  $Pr > F = 0.0131$ ), as was that of FQWI ( $F = 130.81$ ,  $df = 1,111$ ,  $Pr > F = 0.0001$ ). Thus, we concluded that the effect of limited supply on desirability was partially mediated by functional quality perceptions.

The effect of limited supply on DPNT was significant ( $F = 4.52$ ,  $df = 1,114$ ,  $Pr > F = 0.0357$ ). The effect of exclusivity perceptions on DPNT were also significant ( $F = 52.38$ ,  $df = 1,111$ ,  $Pr > F = 0.0001$ ).

We then looked for the effects of limited supply with the exclusivity mediator. The effect of limited supply on DPNT was significant ( $F = 4.73$ ,  $df = 1,111$ ,  $Pr > F = 0.0317$ ), as was that of EXWI ( $F = 22.05$ ,  $df = 1,111$ ,  $Pr > F = 0.0001$ ). Thus, we conclude that the effects of limited supply on desirability are partially mediated by exclusivity perceptions.

Next, we looked for the effect of functional quality perceptions (FQWI) on DPNT, and we found it significant ( $F = 41.93$ ,  $df = 1,111$ ,  $Pr > F = 0.0001$ ). Finally, we looked for the effect of limited supply with the functional quality mediator. The effect of limited supply on DPNT was significant ( $F = 3.95$ ,  $df = 1,111$ ,  $Pr > F = 0.00493$ ), as was that of FQWA ( $F = 62.64$ ,  $df = 1,111$ ,  $Pr > F = 0.0001$ ). Thus, the effect of limited supply on likelihood of purchase was also partially mediated by functional quality perceptions.

Finally, we looked at the effect of limited supply on the choice measure (CH). The effect was not significant ( $\text{Chi-Square} = 3.27$ ,  $df = 1$ ,  $\text{Prob} = 0.0706$ ). The lack of support for hypothesis 1 for the CH measure eliminates the need for mediating effects tests. In summary, H1 was supported for the DES and DPNT measures in both studies. No support was found for the choice measure in either one of the two studies.

These results for hypothesis 1 including the tests for

mediating effects of exclusivity and functional quality perceptions are summarized for watches and wine in Table 10.

TABLE 10: H1 Tests for Watches and Wine

	Supply Effect	Excl. Mediat. (EX)	Supply Effect with (EX)	Funct. Mediat. (FQ)	Supply Effect with (FQ)
<hr/>					
<u>Watches</u>					
DES	yes	yes	full	yes	partial
DPNT	yes	yes	full	yes	partial
CH	no	-	-	-	-
<hr/>					
<u>Wine</u>					
DES	yes	yes	full	yes	partial
DPNT	yes	yes	partial	yes	partial
CH	no	-	-	-	-
<hr/>					

H2 Tests for Watches

To test the effects of supply limitation between the symbolic and functional consumption motivation we contrasted the attractiveness means of cells 2 and 4, with that of cells 3 and 5. We followed the same pattern as with the tests for hypothesis 1 with one exception. We report the results for steps 2 and 4 at the beginning since they are identical for

all cells. The effects of the exclusivity mediator in both watches (EXWA) and wine (EXWI) on all three attractiveness measures (DES, DPNT, CH) are significant at the ( $Pr > F = 0.0001$ ) level for H2, H3 and H4. Similarly, the effects of the functional quality mediator in both watches (FQWA) and wine (FQWI) on all three attractiveness measures (DES, DPNT, CH) are significant at the ( $Pr > F = 0.0001$ ) level for H2, H3, and H4. Thus, for the rest of this section we report only steps 1, 3, and 5. However, the results of all 5 steps appear at the summary table at the end of this report of the hypothesis tests.

The effect of consumption motivation on relative desirability (DES) was significant ( $F = 6.92$ ,  $df = 1, 90$ ,  $Pr > F = 0.0100$ ). In step 3 we looked for the effect of consumption motivation with the exclusivity mediator included in the analysis. The effect of consumption motivation on DES was not significant ( $F = 2.47$ ,  $df = 1, 87$ ,  $Pr > F = 0.1195$ ), but that of EXWA was significant ( $F = 31.77$ ,  $df = 1, 87$ ,  $Pr > F = 0.0001$ ). Thus, we concluded that the effect of consumption motivation on desirability was fully mediated by exclusivity perceptions.

In step 5 we looked for the effect of consumption motivation with the functional quality mediator included in the analysis. The effect of consumption motivation on DES was significant ( $F = 3.92$ ,  $df = 1, 87$ ,  $Pr > F = 0.0507$ ), as was that of FQWA ( $F = 31.48$ ,  $df = 1, 87$ ,  $Pr > F = 0.0001$ ). Thus, we

concluded that the effect of consumption motivation on desirability was partially mediated by functional quality perceptions.

We examine effects on the likelihood of purchase (DPNT) measure in a similar manner. The effect of consumption motivation on DPNT was significant ( $F = 17.27$ ,  $df = 1, 90$ ,  $Pr > F = 0.0001$ ). We then examined for the effect of consumption motivation with the exclusivity mediator (EXWA) included in the analysis. The effect of consumption motivation on DPNT was significant ( $F = 11.55$ ,  $df = 1, 87$ ,  $Pr > F = 0.0001$ ), as was that of EXWA ( $F = 29.74$ ,  $df = 1, 87$ ,  $Pr > F = 0.0001$ ). Thus, we conclude that the effect of consumption motivation on likelihood of purchase was partially mediated by exclusivity perceptions.

In step 5 we looked for the effect of consumption motivation with the functional quality mediator (FQWA). The effect of consumption motivation on DPNT was significant ( $F = 14.09$ ,  $df = 1, 87$ ,  $Pr > F = 0.0003$ ), as was that of FQWA ( $F = 38.62$ ,  $df = 1, 87$ ,  $Pr > F = 0.0001$ ). Thus, we concluded that the effect of consumption motivation on likelihood of purchase was partially mediated by functional quality perceptions.

Finally, we examined at the effects of consumption motivation on choice (CH). The effect was significant (Chi-Square = 15.71,  $df = 1$ , Prob = 0.0001). We then looked for the effect of consumption motivation with the exclusivity

mediator (EXWA). The effect of consumption motivation was significant (Chi-Square = 7.71,  $df=1$ , Prob = 0.0055) as was that of EXWA (Chi-Square 15.89,  $df=1$ , Prob=0.0001). Thus, we concluded that the effect of consumption motivation on choice was partially mediated by exclusivity perceptions.

In step 5 we looked for the effect of consumption motivation with the functional quality mediator (FQWA) included in the analysis. The effect of consumption motivation on CH was significant (Chi-Square =12.38,  $df=1$ , Prob = 0.0004), along with FQWA (Chi-Square =17.31,  $df=1$ , Prob= 0.0000). Thus, we concluded that the effect of consumption motivation on choice was partially mediated by functional quality perceptions. In summary we find support for hypothesis 2 for all attractiveness measures in the watch study.

### H2 Tests for Wine

The effect of consumption motivation on relative desirability (DES) was significant ( $F=5.23$ ,  $df=1,90$ ,  $Pr>F=0.0245$ ). In step 3 we looked for the effect of consumption motivation with the exclusivity mediator (EXWI) included in the study. The effect of consumption motivation on DES was not significant ( $F=0.64$ ,  $df=1,87$ ,  $Pr>F=0.4267$ ). However, EXWI had a significant effect ( $F=20.58$ ,  $df=1,87$ ,  $Pr>F=0.0001$ ). Thus, we concluded that the effect of consumption motivation on desirability was fully mediated by exclusivity

perceptions.

In step 5 we looked for the effect of consumption motivation with the functional quality mediator (FQWI) included in the analysis. The effect of consumption motivation on DES was not significant ( $F = 0.81$ ,  $df = 1,87$ ,  $Pr > F = 0.3711$ ). However, FQWA had a significant effect ( $F = 83.16$ ,  $df = 1,87$ ,  $Pr > F = 0.0001$ ). Thus, we concluded that the effect of consumption motivation on desirability was fully mediated by functional quality perceptions.

We repeated the same analysis for the likelihood of purchase (DPNT) measure. The effect of consumption motivation on DPNT was significant ( $F = 6.32$ ,  $df = 1,90$ ,  $Pr > F = 0.0137$ ). We then examined for the effect of consumption motivation with the exclusivity mediator (EXWI) included in the analysis. The effect of consumption motivation on DPNT was not significant ( $F = 1.61$ ,  $df = 1,87$ ,  $Pr > F = 0.2081$ ), but that of EXWA was ( $F = 11.86$ ,  $df = 1,87$ ,  $Pr > F = 0.0009$ ). Thus, we conclude that the effect of consumption motivation on likelihood of purchase was fully mediated by exclusivity perceptions.

In step 5 we examined the effect of consumption motivation with the functional quality mediator (FQWI) included in the analysis. The effect of consumption motivation on DPNT was not significant ( $F = 0.02$ ,  $df = 1,87$ ,  $Pr > F = 0.8911$ ), but that of FQWI was ( $F = 46.63$ ,  $df = 1,87$ ,



$Pr > F = 0.0001$ ). Thus, we concluded that the effect of consumption motivation on likelihood of purchase was fully mediated by functional quality perceptions.

Finally, we looked at the effect of consumption motivation on choice (CH). The effect was significant (Chi-Square = 8.51,  $df = 1$ , Prob = 0.0035). We then looked for the effect of consumption motivation with the exclusivity mediator (EXWI) included in the analysis. The effect of consumption motivation was significant (Chi-Square = 4.44,  $df = 1$ , Prob = 0.0351) as was that of EXWI (Chi-Square 8.00,  $df = 1$ , Prob = 0.0047). Thus, we concluded that the effect of consumption motivation on choice was partially mediated by exclusivity perceptions.

In step 5 we examined the effect of consumption motivation with the functional quality mediator (FQWI) included in the analysis. The effect of consumption motivation on CH was not significant (Chi-Square = 1.18,  $df = 1$ , Prob = 0.2767), but that of FQWI was significant (Chi-Square = 20.14,  $df = 1$ , Prob = 0.0000). Thus, we concluded that the effect of consumption motivation on choice was fully mediated by functional quality perception. In summary, we find support for H2 for all three attractiveness measures in the study with wine.

All results for hypothesis 2 including the tests for mediating effects of exclusivity and functional quality

perceptions are summarized for watches and wine in Table 11.

TABLE 11: H2 Tests for Watches and Wine

	Cons. Motiv.	Excl. Mediat. (EX)	Cons. Motiv. with (EX)	Funct. Mediat. (FQ)	Cons. Motiv. with (FQ)
<u>Watches</u>					
DES	yes	yes	full	yes	partial
DPNT	yes	yes	partial	yes	partial
CH	yes	yes	partial	yes	partial
<u>Wine</u>					
DES	yes	yes	full	yes	full
DPNT	yes	yes	full	yes	full
CH	yes	yes	partial	yes	full

### H3 Tests for Watches

To test the effect of supply limitation between the private and public consumption situation we pooled the attractiveness measures in cells 2 and 3, and contrasted this mean with that of cells 4 and 5. The test patterns were the same as those for hypothesis 2.

The effect of consumption situation on relative desirability (DES) was not significant ( $F = 2.73$ ,  $df = 1, 90$ ,

$Pr>F = 0.1023$ ). Hence, additional mediational effects were not tested.

The effect of consumption situation on purchase likelihood (DPNT) was also not significant ( $F = 2.64$ ,  $df = 1, 90$ ,  $Pr>F = 0.1078$ ). Thus, no further mediator effects were tested.

Consistent with these results, consumption situation had no effect on choice (CH). The effects were not significant (Chi-Square = 1.36,  $df = 1$ , Prob = 0.2435). In summary, no support was found for H3 in the watch study.

### H3 Tests for Wine

The effect of consumption situation on relative desirability (DES) was significant ( $F = 10.56$ ,  $df = 1, 90$ ,  $Pr>F = 0.0016$ ). In step 3 we looked for the effect of consumption situation including the exclusivity mediator (EXWI) in the analysis. The effect of consumption situation on DES was significant ( $F = 8.15$ ,  $df = 1, 87$ ,  $Pr>F = 0.0054$ ), as was that of EXWI ( $F = 20.58$ ,  $df = 1, 87$ ,  $Pr>F = 0.0001$ ). Thus, we concluded that the effect of consumption situation on desirability was partially mediated by exclusivity perceptions.

In step 5 we looked for the effect of consumption situation with the functional quality mediator (FQWI) included in the analysis. The effect of consumption situation on DES was significant ( $F = 8.33$ ,  $df = 1, 87$ ,  $Pr>F = 0.0049$ ), as was that of FQWI ( $F = 83.16$ ,  $df = 1, 87$ ,  $Pr>F = 0.0001$ ).

Thus, we concluded that the effect of consumption situation on desirability was partially mediated by functional quality perceptions.

We repeated the same pattern of analysis for the purchase likelihood (DPNT) measure. The effect of consumption situation on DPNT was significant ( $F = 4.08$ ,  $df = 1, 90$ ,  $Pr > F = 0.0463$ ). We then examined the effect of consumption situation with the exclusivity mediator (EXWI) included in the analysis. The effect of consumption situation on DPNT was not significant ( $F = 2.67$ ,  $df = 1, 87$ ,  $Pr > F = 0.1059$ ), but that of EXWA was ( $F = 11.86$ ,  $df = 1, 87$ ,  $Pr > F = 0.0009$ ). Thus, we concluded that the effect of consumption situation on purchase likelihood was fully mediated by exclusivity perceptions.

In step 5 we looked for the effect of consumption situation with the functional quality mediator (FQWI) included in the analysis. The effect of consumption situation on DPNT was not significant ( $F = 1.29$ ,  $df = 1, 87$ ,  $Pr > F = 0.2592$ ), but that of FQWI was ( $F = 46.63$ ,  $df = 1, 87$ ,  $Pr > F = 0.0001$ ). Thus, we concluded that the effect of consumption situation on likelihood of purchase was fully mediated by functional quality perceptions.

Finally, we examined the effect of consumption situation on choice (CH). The effect was significant (Chi-Square = 3.79,  $df = 1$ , Prob = 0.0517). Additional analysis showed that

when the exclusivity mediator (EXWI) was included, the effect of consumption situation was not significant (Chi-Square = 2.39,  $df=1$ , Prob = 0.1224) but that of EXWI was significant (Chi-Square 8.00,  $df=1$ , Prob=0.0047). Thus, we concluded that the effect of consumption situation on choice was fully mediated by exclusivity perceptions.

In step 5 we looked for the effect of consumption situation with the functional quality mediator (FQWI) included in the analysis. The effect of consumption situation on CH was not significant (Chi-Square =1.74,  $df =1$ , Prob = 0.1874), but that of FQWI was significant (Chi-Square =20.14,  $df=1$ , Prob= 0.0000). Thus, we concluded that the effect of consumption situation on choice was fully mediated by functional quality perception. In summary, we conclude that H3 is supported for all attractiveness measures in the wine study.

All results for hypothesis 3 including the tests for mediating effects of exclusivity and functional quality perceptions are summarized for watches and wine in Table 12.

TABLE 12: H3 Tests for Watches and Wine

	Cons. Situa.	Excl. Mediat. (EX)	Cons. Situa. with (EX)	Funct. Mediat. (FQ)	Cons. Situa. with (FQ)
<hr/>					
<u>Watches</u>					
DES	no	yes	-	yes	-
DPNT	no	yes	-	yes	-
CH	no	yes	-	yes	-
<hr/>					
<u>Wine</u>					
DES	yes	yes	partial	yes	partial
DPNT	yes	yes	fully	yes	full
CH	yes	yes	full	yes	full
<hr/>					

H4 for Watches

The interaction effect is tested within the four treatment (limited supply condition) groups (i.e. cells 2,3,4, and 5). The interaction effect of consumption motivation and situation on relative desirability (DES) was not significant ( $F = 0.11$ ,  $df=1,90$ ,  $Pr>F = 0.7462$ ). Thus, no further mediator effects were tested. The interaction effect of consumption motivation and situation for the purchase likelihood (DPNT) was also not significant ( $F = 0.02$ ,  $df = 1,90$ ,  $Pr>F = 0.8761$ ). Consistent with these results, there

was no significant interaction of consumption motivation and situation on choice (CH) (Chi-Square = 0.5, df =1, Prob = 0.4805). In summary, we found no support for H4 in the watch study.

#### H4 for Wine

Similar to the results for watches, the interaction of consumption motivation and situation on relative desirability (DES) was not significant ( $F = 3.25$ ,  $df = 1, 90$ ,  $Pr > F = 0.0749$ ). Also, no effect was found on purchase likelihood (DPNT) measure ( $F = 0.48$ ,  $df = 1, 90$ ,  $Pr > F = 0.4916$ ).

Finally, the interaction effect of consumption motivation and situation on choice (CH) was also not significant (Chi-Square = 0.85,  $df = 1$ , Prob = 0.3567). No further tests for mediation were conducted in any of these cases. In summary, we found no support for H4 in the wine study. Table 13 summarizes the results of hypothesis 4.

TABLE 13: H4 Tests for Watches and Wine

	Inter. Effect	Excl. Mediat. (EX)	Inter. Effect with (EX)	Funct. Mediat. (FQ)	Inter. Effect with (FQ)
<hr/>					
<u>Watches</u>					
DES	no	-	-	-	-
DPNT	no	-	-	-	-
CH	no	-	-	-	-
<hr/>					

Wine

DES	no	-	-	-	-
DPNT	no	-	-	-	-
CH	no	-	-	-	-

3.4. Discussion

The key hypothesis in this study is that limiting the supply for a brand can generate exclusivity goodwill which in turn can be transferred down the line to a lower-end brand extension. Creating exclusivity by limiting the supply of a brand at the high end of a product line can be an effective managerial strategy for creating additional demand for a brand at the lower end of the same product line.

Hypothesis 1

For both watches and wine, hypothesis 1 is supported for the desirability and likelihood of purchase measures, but not for choice. In general, we can interpret this as a support for hypothesis 1 in both product categories, watches and wine. The results show that preference increases for the lower-end extension of a limited edition upper-end brand compared to when there is no supply limitation for the upper-end brand. In the watch study, we find that for both desirability and purchase likelihood, this effect is fully mediated by exclusivity perceptions. While supply limitations may also create some perceptions of functional superiority,



this alone does not explain the enhanced preference. These results are consistent with the ideas presented in the literature review section. Limited supply creates perceptions of exclusivity, prestige and status which, in turn increase preference.

In the wine study, we observe a similar pattern of results for the desirability measure. For purchase likelihood, the exclusivity mediation is not complete. However, the enhanced preference is not fully explained by perceptions of functional superiority. Thus, while the evidence for exclusivity mediation is as hypothesized, there is consistent evidence that supply limitations may also create perceptions of functional superiority that could also contribute to the increased preference. Moreover, one might note that there are other symbolic meanings besides status that consumers may associate with scarcity and limited supply (e.g. aesthetic quality) that may not have been tapped by our exclusivity measures in this study.

### Hypothesis 2

Hypothesis 2, stated that product attractiveness for the lower end extension of a limited supply upper end brand would be higher when consumption is symbolically versus functionally motivated. This received support in both product categories. Supply limitations had a greater impact under symbolic consumption motivation for both watches and wine.

However, the enhanced attractiveness was derived by different patterns of mediating perceptions.

For watches, the supply limitation manipulation enhanced attractiveness more when consumption was symbolically versus functionally motivated. The data on mediational patterns suggest that for all but one dependent measure, both exclusivity and functional superiority perceptions partially mediated this difference. Thus, for this durable product, supply limitations appear to have produced perceptions of both exclusivity and functional superiority, and these exerted separate effects on attractiveness, even when consumption was symbolically motivated. In contrast, for wine, there was complete mediation for both exclusivity and functional superiority perceptions even when consumption was symbolically motivated. This appears to be an anomalous result. However, the apparent contradiction may be resolved by considering that with a product such as wine, perceptions of exclusivity and functional superiority may be highly correlated. Hence, that both types of perceptions show complete mediation of the consumption motivation effect, may simply suggest that these perceptions are highly correlated and perhaps inseparable for products such as wines. In fact, for wines, respondents may have generated answers to the functional quality questions simply based on their exclusivity perceptions. Future research needs to examine

such possibilities more closely.

### Hypothesis 3

Hypothesis 3 stated that product attractiveness for the lower end extension of a limited supply upper end brand would be higher when consumption is public versus private. This hypothesis was supported for all three attractiveness measures in the wine study. However, no such support was found in the watch study.

For wine, the supply limitation manipulation enhanced attractiveness more when consumption was public versus private. The data on mediational patterns suggest that with the exception of the desirability measure, both exclusivity and functional superiority perceptions fully mediated this difference even in public consumption situations. As with the hypothesis 2 results for wine that were presented earlier, the result appears anomalous at first glance. However, once again, it may simply reflect the possibility that perceptions of exclusivity and functional superiority are highly correlated in this product category and that their effects on attractiveness may not be easily separable. Note that for watches, the supply limitation manipulation had similar effects whether the consumption situation was public or private. As such, the issue of differential mediation is moot in this product category. nevertheless, these differences in mediational patterns across product categories should be

explored further in future research.

#### Hypothesis 4

We find no significant interaction effects between consumption motivation and consumption situation for either one of the two studies. In other words, limited supply of the upper end product increased attractiveness of the lower end brand extension. Consumption motivation and consumption situation impact this enhanced attractiveness additively. The central findings here are that a brand's attractiveness can be increased by limiting the supply of a high end product in the brand line and that this increased attractiveness can be transferred down the line to a lower end extension. The managerial implication is that supply and pricing decisions in one market affect not only the demand for the product in that market, but also the demand for other products in the same line that may be differently positioned. This interdependence of supply and pricing across the product line creates the possibility and the importance of optimizing profits not just in each market in isolation but for the product line as a whole. The corollary is that the price and supply decisions that maximize profits only in the upper end market in isolation may be suboptimal when interdependences are considered in the product line.

This extend of exclusivity goodwill transfer from a limited edition product to a lower end extension in the brand

line depends on the conditions of the consumption setting, specifically the consumption motivation and the consumption situation. Under consumption is symbolically (versus functionally) motivated, exclusivity strategies based on limiting the supply of the high end product are effective in increasing the attractiveness of the lower end brand extension. The impact of consumption situation was mixed. A public consumption situation produced a larger supply limitation effect for wine but no significant afformentioned effect for watches. the findings suggest that other product category differences besides consumption motivation and situation may moderate the etend of the supply limitation effect. These differeneecs will have to be eplored in future research.

#### 4. A MODEL FOR PRICING AN EXCLUSIVE PRODUCT GIVEN SIMULTANEOUS DIFFUSION IN TWO GROUPS

##### 4.1. Model Assumptions and Development

We turn in this chapter to a situation where a product's exclusivity is secured by a pricing mechanism in contrast to the limited supply cases discussed in the two previous chapters. In this case, we model the diffusion of a product which is targeted to an upper-income group (target group denoted by  $H$ ), but which can also be acquired by another lower-income group (outside group denoted by  $L$ ) for which the target group functions as an aspirational group.

The model assumes the existence of two groups,  $H$  and  $L$  where  $H$  is the aspirational (target) group and  $L$  is the outside group. The two groups have different demand-price elasticities and the product is introduced to both groups at the same time. Group  $H$  is the product's primary target and while the product is available to group  $L$ , the price is designed to restrict access. Price is held constant over a the time horizon which may be thought of as  $T$ , the life expectancy of the model until the next version is introduced. Each customer can buy only one unit during the time horizon  $T$ , i.e., there is no replacement and no second-hand market. Management's goal is to set a price to maximize profits over a given time  $T$ .

The model uses a framework similar to the original diffusion model introduced by Bass (1969) as well as related extensions (Mahajan, Muller and Bass 1990). Unlike traditional diffusion models that treat the market as one group, we segment the market into two sub-groups, H and L, and we look at the brand diffusion in each sub-group separately. The critical idea in this approach is that the diffusion process in these groups is interdependent. As the product is adopted by members of group H, members of group L associate it with an integral part of the consumption pattern of H. The decoding by members of L is that the product is a symbol of membership in H. Since H is the aspirational group for L, the product's attractiveness among members of L will increase. The result will be a higher adoption rate of the product in L relative to the adoption rate in the case without any diffusion of the brand in H.

We first present the mathematical model of the interdependent diffusion process in groups H and L. We then define the model parameters and develop then behavioral interpretation. The model is a system of two diffusion equations based on extensions of the Bass model by incorporating price (following Dolan and Jeuland 1981) and the relative diffusion in each population. Diffusion in group L is given by:

$$n_L(t) = [Q_L - N_L(t-1)] [\alpha_L + \beta_L N_L(t-1)] \text{EXP}[-\delta_L P + \gamma_L R(t-1)] \quad (1)$$

Diffusion in group H is given by:

$$n_H(t) = [Q_H - N_H(t-1)] [\alpha_H + \beta_H N_H(t-1)] \text{EXP}[-\delta_H P - \gamma_H (1 - R(t-1))] \quad (2)$$

where

$n_L(t)$ ,  $n_H(t)$  = diffusion rate at time  $t$  in groups L, H.

$Q_L$ ,  $Q_H$ , = population of group L, H.

$N_L(t-1)$ ,  $N_H(t-1)$  = cumulative adoption at time  $t-1$  in group L, H.

$\alpha_L$ ,  $\alpha_H$  = coefficient of innovation in groups L, H.

$\beta_L$ ,  $\beta_H$  = coefficient of imitation in groups L, H.

$\delta_L$ ,  $\delta_H$  = coefficient of price sensitivity in groups L, H.

$R(t-1) = N_H(t-1) / [N_H(t-1) + N_L(t-1)]$  = relative diffusion at time  $t-1$ .

$\gamma_L$  = coefficient of exclusivity reflecting the product's higher attractiveness for members of group L; it effectively lowers their price sensitivity.

$\gamma_H$  = coefficient of devaluation reflecting the product's lower attractiveness for members of group H; it effectively increases their price sensitivity.

A high  $R(t)$  describes a high relative diffusion in group H, meaning that most of the product's sales occur in group H, whereas the product remains relatively exclusive in L. For a given coefficient of exclusivity  $\gamma_L$ , a high  $R(t)$  lowers the "effective price" increasing the product's diffusion in L. On the other hand, for a given coefficient of devaluation  $\gamma_H$ , a low  $R(t)$  raises the "effective price" reducing the



product's diffusion in H.

As mentioned before, the "consumption languages" of the two groups and the way they decode the symbolic meaning of the product are different. Whereas the product symbolizes status differences within L for members of L, its symbolic utility for members of H is its ability to differentiate their status from members of L. Thus, it is critical for the product's utility among consumers in H (the product's target market) to remain very exclusive in L. This exclusivity is based on price. Unlike other forms of exclusivity, such as limited supply, which sets an upper bound on the number of units sold, price is an uncertain mechanism. Managers can only ascertain if the price has been successful in restricting product ownership among members of L by observing the product's diffusion in L. As the adoption of the product in L increases, the product's ability to differentiate status between H and L declines. This lowers the product's symbolic utility for members of H. Consequently there is reduced product attractiveness and adoption in H. This is captured in the model by  $\gamma_H$ , the coefficient of devaluation.

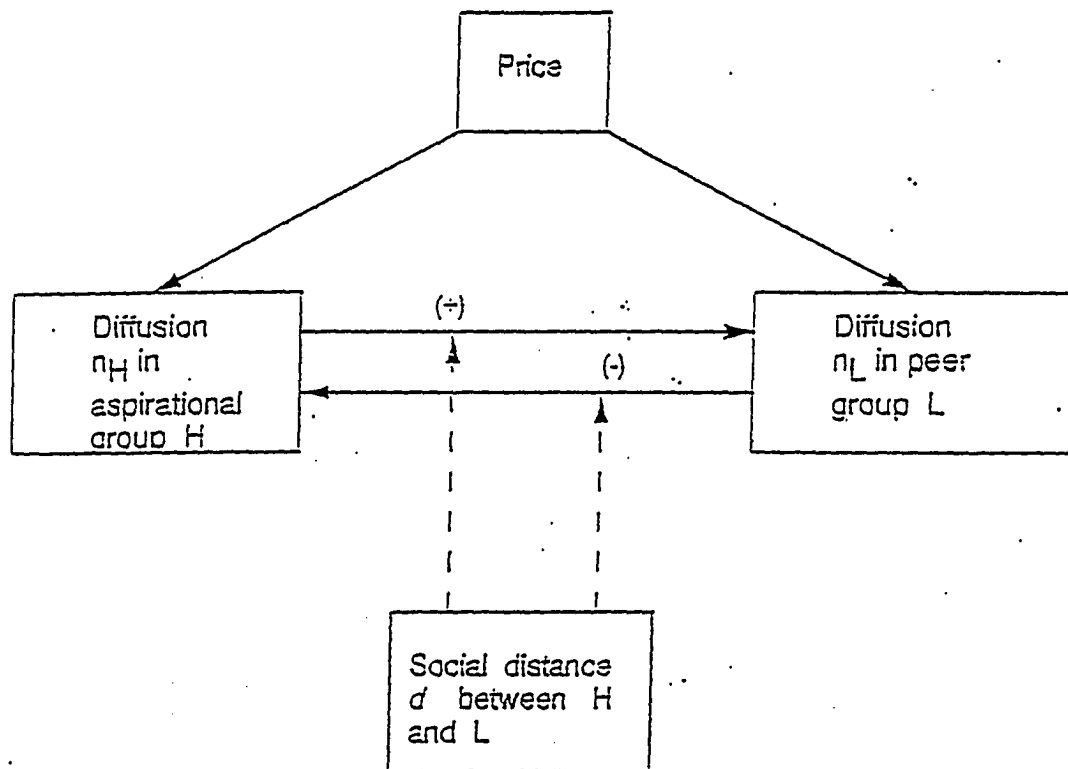
The higher adoption in L as a consequence of the high adoption of the product in H reflects imitation in L of the consumption pattern of H. It is captured in the model by  $\gamma_L$ , the coefficient of exclusivity.

The nature of the interdependence of the diffusion

process in the groups H and L depends on the values of the coefficients of exclusivity and devaluation. These coefficients, however are not the same for any two groups H and L and depend upon of the relative social positions of the two groups. We introduce the concept of social distance to capture this idea and argue that social distance may be operationalized as some combination of the gaps in income, education and job prestige between typical members of the two groups. This operationalization of social distance could also include a subjective group's member's perceptions of how close or distant they feel from the typical member of the other group.

Note that the two groups differ not only in terms of income and price-demand elasticity, but also in the way they interpret the symbolic meaning of the product. Their interpretation is affected by the relative adoption of the product in the two groups, i.e. if the product remains very exclusive in L, members of H interpret it as a symbol that differentiates status between the two groups. However, if more people in L acquire it, members of H cease to interpret it the same way. We argue that in addition to the relative diffusion, social distance between H and L influences how the product's meaning is decoded. The same level of relative adoption of the product in L will be interpreted differently by members of H for different social distances

FIGURE 2: Interdependence of the Diffusion Process

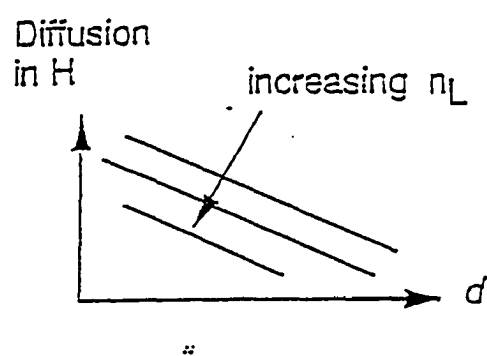


between H and L. Figure 2 captures the key elements of the interdependence of the diffusion process in these two groups.

As the social distance between H and L grows, members of H become more sensitive to the product's adoption by members of L. In other words, the greater the social distance between the two groups, the more they want the product to differentiate status between H and L. This means that the coefficient of devaluation  $\gamma_H$  is a function of the social distance between H and L. The ability of a product to function as a symbol to encode status rests on the extent to which ownership and consumption of this product is confined to desirable, aspirational groups (Dawson and Cavell 1987). If the product is appropriated by a group for which it was originally not meant (in this case L) then it loses its ability to fulfil its original symbolic function. Thus, as Goffman (1951) has argued, symbols which become diffused across levels of the class hierarchy are "fraudulent," i.e. group members are not assured that consumption and ownership of these symbols guarantees a certain level of status.

A similar notion was offered by Blumberg (1974), when he wrote that the income redistribution and rising living standards have made objects that previously were available only to the elite available to a majority of the population and has deprived them from their status symbolism. He termed this process "Gresham's Law of Social Status Symbols."

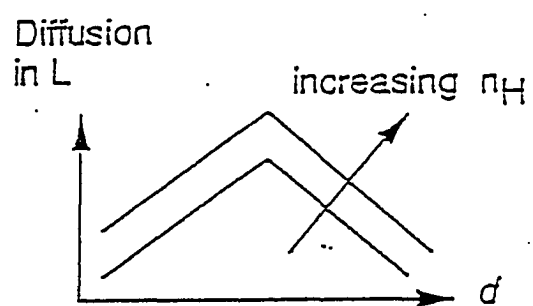
FIGURE 3: Diffusion in H as a function of H-L Social Distance



The upper-income groups' attempt to protect their status symbols from the rising purchasing power of other social groups may be reflected in the continuous increase in the real prices of such items. The examples cited earlier in the dissertation were drawn from an article in The Economist and such increases in the real prices of status symbols perhaps examples of what Fisher (1987) called "restrictive mechanisms" for limiting the fraudulent use of goods that function as status symbols. Consistent with these ideas, we argue that for a given adoption level of the product by L, diffusion in H will decline monotonically as the social distance between H and L increases (see Figure 3).

We expect that, up to a point, the product's attractiveness and diffusion in L as a function of the social distance between H and L will follow the opposite pattern. The key here is that as the product is adopted by members of H and becomes a symbol of membership in H, consumers in L will desire it more. Perceived attractiveness and adoption in L will increase monotonically the more H is seen as an aspirational group for L (i.e. the greater the social distance between H and L). This will be true however, only up to some level of social distance. However, beyond this level, the social distance between H and L may become so large that H's ability to fulfill the role of an aspirational group declines. This may be because the increased social

FIGURE 4: Diffusion in L as a function of H-L Social Distance



\* As  $d$  increases, H ceases being aspirational (Fussell 1983)

distance makes it unrealistic or even untenable for people in L to join H. For example, Fussell (1983) described how members of the lower middle class aspired to join the upper middle class, but not the upper class. In summary, we argue that for a given diffusion level of the product in H, its adoption in L will increase with increasing social distance between H and L. However, beyond a certain level of social distance between H and L, adoption in L will decrease with increasing social distance (see Figure 4).

#### 4.2 Simulation for optimal Price

Returning to our model, Equations 1 and 2 described the proposed diffusion process in the two groups L and H respectively. Moreover, the preceding discussion established that the coefficients of devaluation and exclusivity were likely to be functions of the social distance between H and L. The coefficient of devaluation would vary with social distance, reflecting the expectation that for any diffusion level of the product in L, the product's attractiveness for members of H would decline with increasing social distance between H and L. The coefficient of exclusivity would vary with social distance such that for any diffusion level of the product in H, the product's attractiveness for members of L would first increase with increasing social distance. However, after a point, the product's attractiveness for members of L would decline with increasing social distance.



The model does not have an obvious analytical solution in closed form. Hence, we conducted a set of simulations to explore the properties of the model. The manager's problem, in the light of the phenomena described, is to determine the optimal price, i.e., the price that will maximize the present value of the profits during the planned horizon  $T$ .

$$\text{Maximize } \Pi = \sum (1+i)^{-t} \pi(t), \quad t=1, \dots, T \quad (3)$$

$$\pi(t) = [P - C(t)][n_L(t) + n_H(t)] \quad (4)$$

$$C(t) = [C(t-1)][S(t)/S(t-1)]^{-m} \quad (5)$$

$$S(t) = N_L(t) + N_H(t) \quad (6)$$

$\pi(t)$  = profit in time  $t$

$C(t)$  = unit cost in time  $t$

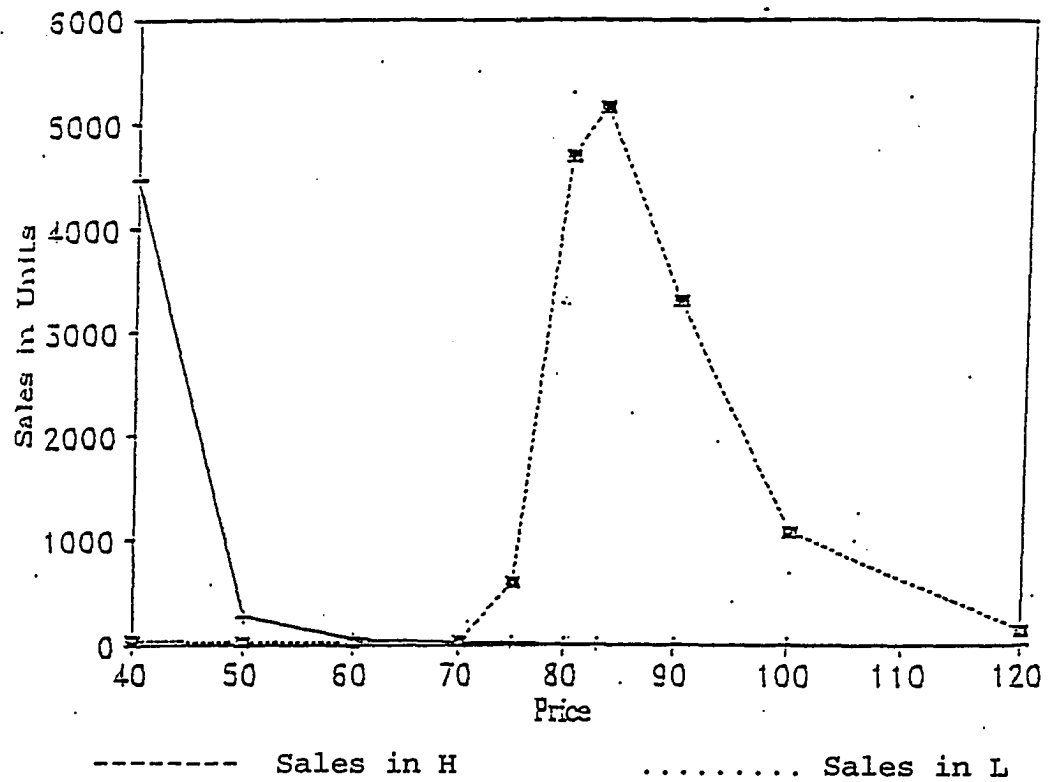
$m$  = learning curve

$i$  = discount rate

The simulations were designed to explore the relationship between the optimal price and the diffusion levels in the two groups as well as the relationship between the optimal price and the various parameters.

Initially, we chose a time horizon of 11 time periods. The parameters used in the simulation were chosen by trial and error to ensure that predicted adoption (sales) in H and L (after 11 time periods) would remain lower than the population stipulated by that group. In the first set of runs, we held all parameters constant and explored the optimal price. These runs showed that there is an optimal

FIGURE 5: Sales in H and L at Different Price Levels



price which maximizes system profits. If the price is too low, sales in L are high, but sales in H are close to zero. Thus, a low price strategy gives up entirely on H. The optimal price reflects the diffusion trade-offs between the two groups. The simulation suggests that it is a price that keeps the product very exclusive in L, but fairly widespread in H. A price much above the optimal simply cuts down on sales in H without improving the differentiating power of the product since adoption in L is almost zero. Moreover, for some parameter values, there is a range between the optimal price and a very low price where one practically kills both markets (see sales in L and H in Figure 5).

Figure 6 shows the net present value of profits for varying prices; it corresponds to the sales in H and L shown in Figure 5. Although total sales are high when prices are (based on high diffusion in group L), profits are very low since the margin is very low.

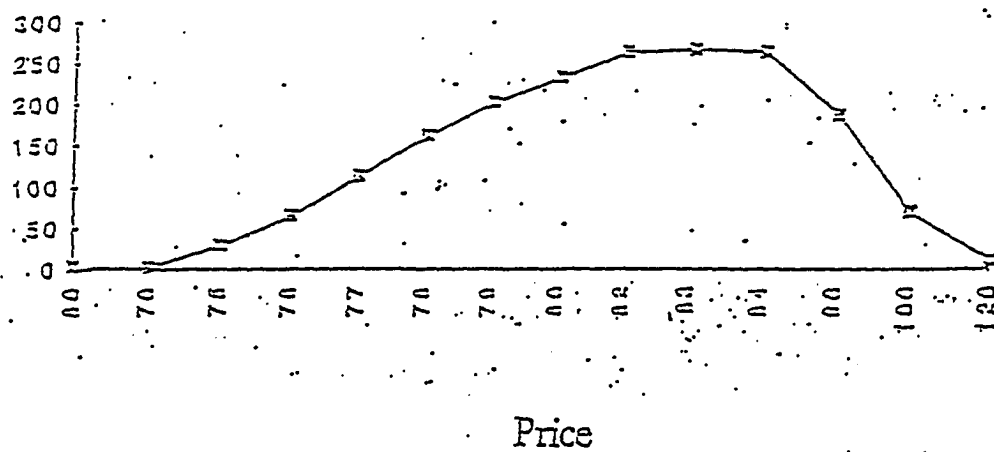
The optimal price was also sensitive to the relative size of the two populations. Intuition suggests that the aspiration group H is generally smaller than the peer group L. The simulations shown in Figures 5 and 6 are based on a population ratio  $Q_H:Q_L = 1:3$ . Examination of the exponent from Equation 2 shows that adoption in L effectively raises the price of the product in H. It is as if the 'effective price' of the product to members of H was higher to a degree

FIGURE 6: Net present value of profits for Different Price Levels

$Q_H$  = population of group H

$Q_L$  = population of group L

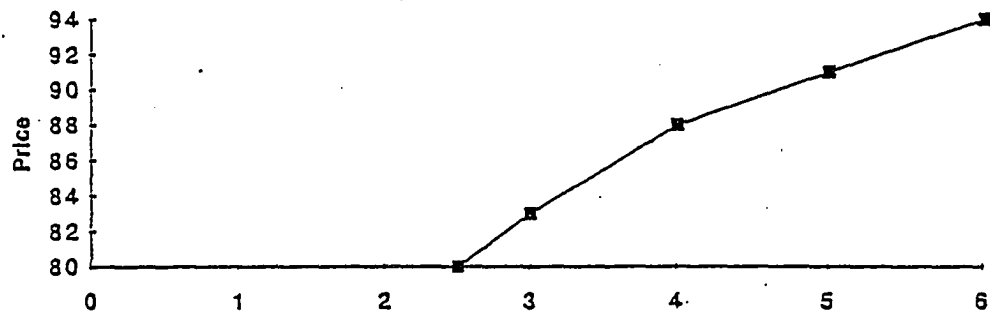
Max Profit for  $Q_H : Q_L = 1:3$



Optimal price  $P^* = 83$

FIGURE 7: Optimal Price for Different Group Size Ratios

Profit-maximizing price as a function of  $Q_H:Q_L$  ratio when  $Q_H + Q_L = \text{const.}$



$Q_H:Q_L = 1:$

determined by the relative sizes of the two populations. Hence, a smaller relative population of H is more sensitive to the initial high adoption of the brand by L. Thus, a smaller relative size of the population in H (while keeping the total market size  $Q_H + Q_L$  constant), causes the optimal price to go up (see Figure 7).

Until now, consistent with our previous discussion, all coefficients in the simulations had been held constant. The effects of social distance between H and L (see Figure 3 and Figure 4) were examined in the simulation by varying the coefficients of exclusivity  $\gamma_L$  and devaluation  $\gamma_H$ . As the social distance between H and L grows, members of H are more sensitive to the product's ability to differentiate status between the two groups. Thus, for the same relative diffusion  $R(t)$ , the attractiveness of the product for members of H declines monotonically increasing social distance (denoted by  $d$ ) between H and L. This sensitivity to social distance is captured by the coefficient of devaluation  $\gamma_H = f_H(d)$ , where  $\partial\gamma_H/\partial d > 0$ .

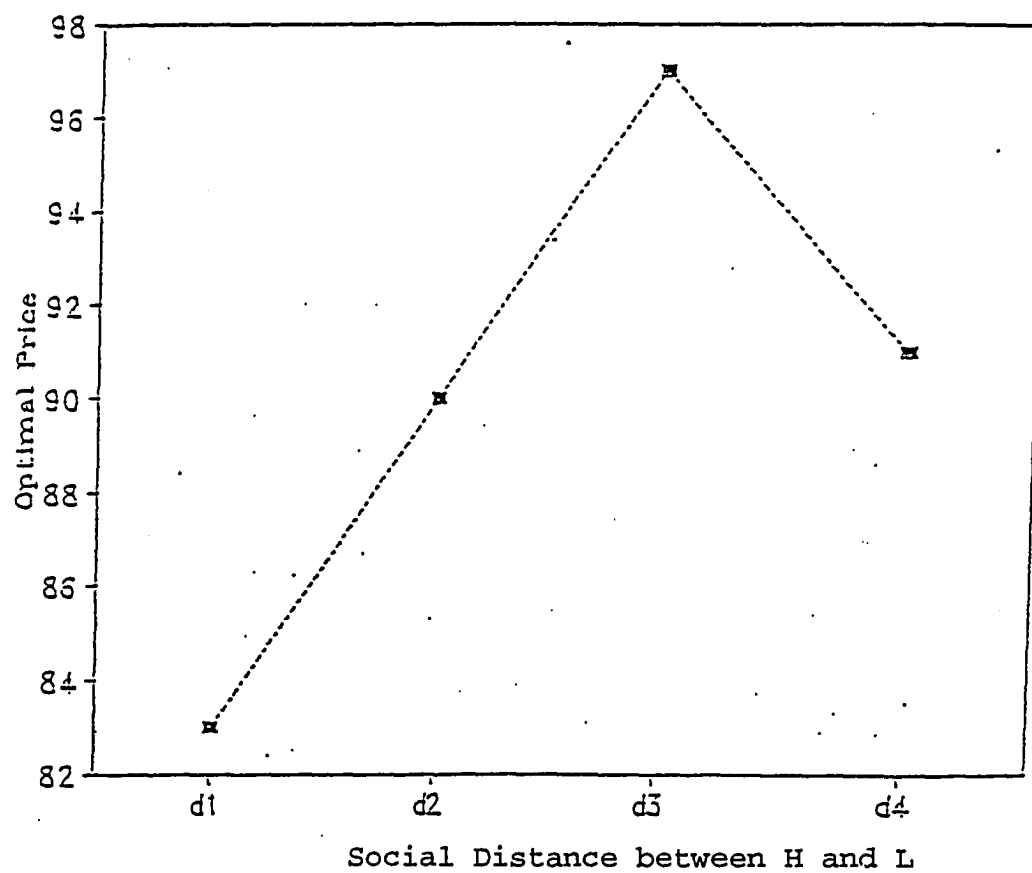
Increasing  $d$  has a different effect as how members of L perceive the product. For any given level of  $R(t)$ , until  $d = d^*$ , increasing social distance raises the appeal of group H as an aspirational group and raises the product's attractiveness for members of L. However, for  $d > d^*$ , H begins to lose its appeal as an aspirational group. This

lowers the attractiveness of the product for members of L (see Figure 4). Both effects are captured by the coefficient of exclusivity  $\gamma_L = f_L(d)$ , where  $\partial\gamma_L/\partial d > 0$  for  $0 < d < d^*$ , and  $\partial\gamma_L/\partial d < 0$  for  $d > d^*$ .

A simulation of the effects of the social distance on the optimal price reveals that for  $d < d^*$ , the optimal price rises monotonically. Intuitively this is because the coefficient of devaluation has relatively larger impact than the coefficient of exclusivity, and both increase in this range. In other words, given the increase in product desirability, we need a higher price to restrict its adoption among members of L. For  $d > d^*$ , the optimal price level declines. This is due to the declining coefficient of exclusivity, which produces a lower level of product desirability among members of L. The simulation results are shown in Figure 8.

In summary, the simulations show that the model is sensitive to the initial diffusion rates in the two groups; too high an initial diffusion in group L establishes the wrong brand image for members of H and inhibits adoption in this market. The point is that in the case of a durable that can function as a status symbol, the initial market perceptions regarding the brand's exclusivity are critical for long-term success. An optimal price achieves the profit-maximizing diffusion trade-off between the two groups and sends

FIGURE 8: Social Distance and Optimal price





the right signal to the marketplace about the status symbolism of the brand. Thus, this optimal price is a critical element in the brand's positioning strategy. As consumers assess the brand's ability to convey status, it settles into a specific market position. Thereafter, *ceteris paribus* the long-term period sales to members of H and L occur in a stable ratio.

#### 4.3 Hypotheses to be Tested

we conclude this chapter by formally explicating the behavioral implications of the model in the form of five conceptual hypotheses. the first couple of hypotheses examine how different levels of adoption in one social group impact upon the demand for the product in the other group., holding fixed the social distance between the groups. We focus first on the exclusivity phenomenon whereby as a prestigious brand is adopted by members of group H, it becomes a symbol of membership in it. Thus, it becomes more desirable for members of L. more formally, we have:

H1: As adoption in H goes up, demand in L increases.

However, as more of the members of L adopt the brand, it loses its ability to differentiate status between H and L. This devalues the brand, which then begins to lose its

attractiveness to members of H. This phenomenon is formally reflected in:

H2: As adoption in L goes up, demand in H decreases.

Next, we examine how the social distance between the two groups influences demand in each group, holding fixed adoption level in the other group. Thus, for any given level of adoption in H, the greater the social distance between H and L, the higher the demand in L. More formally:

H3: For a fixed adoption level in H, the greater the social distance between H and L, the higher the level of demand in L.

Conversely, for any level of adoption in L, the adverse impact on demand in H is expected to be higher the further the two groups are from each other. Thus, the demand in H is expected to be lower, the greater the social distance between H and L. Expressed formally:

H4: For a fixed adoption level in L, the greater the social distance between H and L, the lower the level of demand in H.

Finally, we recognize the asymmetrical behavior of the adoption patterns in the two groups, beyond some social distance threshold. Past this threshold, H ceases to be aspirational group for L. Nevertheless, members of H still want to maintain a distinct identity from the members of L. hence, we expect the prediction in H4 to hold regardless of the level of social distance. However, we expect that members of L behave differently from what is predicted in H3 after this social distance threshold is reached. The members of L then do not aspire to join H, and in fact, may even shy away from those behaviors that are characteristic of members of H. Thus, after a threshold level of social distance, we predict:

H5: As adoption in H increases, demand in L decreases.

In the next chapter we describe an experiment that tests these hypotheses.

## 5. AN EXPERIMENTAL INVESTIGATION OF THE MODEL FOR PRICING AN EXCLUSIVE BRAND GIVEN SIMULTANEOUS DIFFUSION IN TWO POPULATIONS

### 5.1 Experimental Design

In this chapter, we describe an experiment that was designed to test the five behavioral hypotheses discussed in the previous chapter. A two-factor between subjects design was used. These factors are: (1) Relative diffusion of ownership of a product in group H and L (at two levels, high and low); and (2) Social distance between groups H and L (four levels). As shown in Appendix J, subjects were asked to participate in a situation involving the selection and purchase of a luxury watch for themselves. The factors above were manipulated (see Appendix L) via the descriptions of two watches which were given fictional names (Pheoton Monarch and Nigiren Royale). The subjects were told that the products were real but that the names were disguised. For each brand (Pheoton and Nigiren), product descriptions (of the Monarch and Royale models respectively) started with a general statement about the company, its history and tradition. The watches themselves were described next. Finally the two factors above were manipulated in a section that gave information about relative diffusion among two different social groups.

The descriptions of the two watches were developed such

that they would be perceived as being of about equal quality and price. Over 50 print advertisements for watches from newspapers and magazines were used to generate the attributes used to describe the watches. The descriptions were pretested to determine their baseline level of preference. Overall preference was measured along two dimensions. First, the overall desirability of the Pheoton Monarch relative to Nigiren Royale was measured on a 7-point scale (1 = less desirable and 7 = more desirable). For the second measure, subjects allocated 100 points between the two alternatives to reflect their relative likelihood of purchase. Thirty-seven business undergraduates (24 seniors and 13 juniors) at a university in the southwest participated in the pretests. The group consisted of 24 males and 13 females with an average age of 22.6 years. Table 14 summarizes the outcomes of the pretest (LKPR = likelihood of purchase and DES = desirability of Pheoton relative to the desirability of Nigiren).

TABLE 14: Stimuli Pretests

	Pheoton Monarch	Nigiren Royale
LKPR	47.17	52.83
DES	4.56	

The data in Table 14 indicate that the alternatives were

about equally attractive. We picked the Pheoton Monarch description to embedd the manipulations of relative diffusion of ownership and social distance. The Nigiren Royale description was used as the benchmark of comparison. Although some general description of ownership diffusion among several social groups was provided for the Nigiren Royale, this remained constant across all treatment conditions.

Relative diffusion of ownership (which refers to the proportion of owners belonging to the anchor group versus the contrast group) was manipulated at two levels, high and low. When L was the anchor group, the high diffusion condition stated that 95% of all Pheoton Monarch owners belonged to L and that 5% belonged to H. In the low diffusion condition, the ratio was 50% for L and H. These identical diffusion levels were used when the anchor group was H and the contrast group was L.

Social distance was manipulated at four levels since the effect of social distance on the brand's diffusion in L for a given penetration level in H was expected to be nonmonotonic (i.e., an inverted U-shape). The manipulation was created by parring an anchor group (H or L) with four versions of the contrast group (L or H). These group descriptions were constructed to be at different social distances from the anchor group.

Si different social group profiles were developed by

varying descriptions of sources and level of income, education, the nature of the profession, job experience and expertise, as well as self-perceptions of one's own social group. These descriptions (of Social Groups X, H, L1, L2, L3, and L4) are shown in Appendix K. As is evident from the descriptions, H was described as a group of successful upscale professionals., L1 and L2 were white collar workers (established and early-career respectively), whereas L3 and L4 were blue-collar workers (established and early-career respectively). The descriptions were validated in a pretest with 24 subjects (undergraduate business students at a southwestern university) which showed that the described groups were perceived to be at significant social distances from each other ( $P < F = 0.001$ ). The Group X description was not pretested at that time and was added following the pretest prior to the experiment to address other determinants of perceived social status (e.g., independent, inherited wealth) beside occupation and professional attainments.

Tests of hypotheses 1 and 3 involved using Group L3 (established blue collar workers) as the anchor and groups L2, L1, H, and X as the contrast groups at increasing social distances from L3 (the anchor group). In other words, brand attractiveness ratings were examined for group L3 as the contrast groups were varied in the scenarios. Tests of hypotheses 2 and 4 were constructed using Group H

(established upscale professionals) as the anchor, and groups L1, L2, L3, and L4 as the contrast groups at increasing social distance from H (the anchor group). In other words, these tests examined the brand attractiveness ratings for Group H, as the contrast groups were varied using the scenarios.

The study subjects were selected such that they corresponded to the L3 and H profiles so that the perceptions collected were from subjects who actually were from the social groups that they were role-playing in the experiment. Overall, the combination of 2 relative diffusion levels for each of 4 levels of social distance, with the 2 different anchor groups (L3 and H) created a total of 16 distinct study conditions (see Appendix L). The pheoton Monarch description varied in each condition, but the Nigiren Royale description remained constant. The key dependent measure was the rated attractiveness of the Pheoton Monarch description in each of these conditions that described different levels of relative diffusion in a different pair of anchor and contrast groups.

## 5.2 Measurements

### Dependent variables:

Three dependent variables measured the relative attractiveness of the watches (see questions 1-3 in Appendix M): (a) perceived overall relative desirability (DES) on a seven point scale (1 = less desirable and 7 = more



desirable), (b) likelihood of purchase (LKPR) by allocating 100 points among the alternatives, and (c) choice (CH).

Independent variables and manipulation checks:

The following manipulation checks were used: (a) The manipulation of relative diffusion in H and L was checked using four 7-point scales that requested subjects to assess penetration of the brand in each group (see questions 19-22 in Appendix M). (b) The manipulation of social distance between H and L was checked using three 7-point scale items that requested subjects to assess similarity/dissimilarity of social status (DSTAT), social ties (SOCTS), and social interaction (SOCIN) (see questions 16-19 in Appendix M)

Mediator variables:

Our arguments implied that symbolic and functional perceptions would mediate the relationship between preference judgments and relative brand diffusion in the different social groups. these mediations were measured using 7-point scales (see Appendix M, questions 4-6 for the functional perception measures; and questions 7-9 for the symbolic perception measures). The specific symbolic measures were: (a) relative brand exclusivity (EXCL), (b) relative brand prestige (PREST), and (c) relative ability of the brand to convey status (STAT). The functional perception measures were: (a) relative quality of brand features (FEAT), (b) relative overall brand quality (QUAL), and (c) relative

performance (PERF).

The ability of group H to function as an aspirational group for the subjects was also measured. First, on 7-point scales, we measured the extent to which the subject associated with group H (Appendix M, questions 23-24). Two items were used: (a) membership (MEMB) of the subject in group H, and (b) strength of the subject's social ties (TIES) with members of H. A second dimension, the aspirational appeal of group H (Appendix M, questions 25-26) was measured using two 7-point scale items. These were: (a) the subject's likelihood of joining the group in the near future (FUTUR), and (b) the subject's aspiration to join the group (ASPR).

### 5.3.Results

#### 5.3.1 Subject Selection

A total of 213 subjects participated in the study. In testing these hypotheses, it was considered important to ensure that the study subjects whose behavior were being measured came (to the extent possible) from the group whose behavior they were being asked to role play. Thus, H1 and H3 (see chapter 4) predicted the behavior of the members of lower status groups. Hence, for these hypotheses tests, the anchor group was L3 and the subjects were selected to the extent possible from this social group. A total of 107 such subjects represented this group and we will henceforth refer

to them as the L3 subjects. Thirty-three of them were blue collar maintenance technicians employed at a southwestern university. The remainder were recruited with the help of undergraduate students at two universities in the New York metropolitan area. The students were requested to ask a working family member or friend to complete the study. The institutions attract large number of students from the working class and, as expected, about 65% of all questionnaires were completed by blue collar workers and technicians who fit the desired profile. Random phone calls were used to check confirm that the questionnaires had indeed been completed by these people as claimed. The mean age of these 107 subjects was 37.4 years. Fifty nine were male, 48 were females, and 55.1% were married. The ethnic breakdown was 45.8% white, 10.3% African-American, 15% Hispanic, 15.9% Asian-American, 0.9% Native American and 8.4% other. About 46% of the subjects owned their own house or condo. Of the sample, 26.2% earned less than \$24.9K, 60.7% earned between \$25K and 49.9K, 8.4% earned between \$50K and \$74.9K, and 1.8% earned over \$75K (2.8% did not respond). In terms of its education profile, 0.9% of the sample had completed grade school, 31.8% had completed high school, 35.6% had completed trade school, and 31.9% had taken some college courses. Thus, on average, it was believed that the responses of this sample would adequately represent those that one might expect from

"working class" people from a blue collar background. In other words, the "L3 subjects" were expected to role-play the L3 social group in the scenario.

Tests of H2 and H4 mirrored measures of the behavior of the upper stratum. Thus, respondents who were assigned to role play the behavior of the anchor group H were selected such that they either belonged to this group, or were fairly close to joining it. A total of 106 such subjects were identified. We refer to them as the "H subjects." Six were high level managers at a southwestern utility company and another eight held various managerial positions with different organizations in a southwestern city. The remainder were MBA students at a northwestern and a southwestern university who held full-time jobs. The mean age of this sample of H subjects was 30.6 years; fifty were male and 56 were female and 31.1% were married. The ethnic breakdown was 55.7% white, 4.7% African-American, 2.8% Hispanic, 13.2% Asian-American, and 23.6% other. Over 36.% were home owners. In terms of annual income, 17.9% of the sample earned less than \$24.9K, 36.8% earned between \$25K and \$49.9K, 18.9% earned between \$50K and \$74.9K, and 12.3% earned over \$75K (14.2% did not respond). In terms of its educational profile, 67.0% had a college degree, and 32.1% either had, or were in the process of acquiring a graduate degree. Thus, on average, it was believed that the responses from this sample of H subjects

would be representative of a more upscale socio-economic stratum corresponding to a professional, upscale background, i.e. the H social group in the scenario.

### 5.3.2 Manipulation Checks

Subject's perceptions of task and stimulus realism were measured on four 7-point Likert scales. The four questions (see questions 28-31 in appendix D) measured the realism of the watch descriptions (DESCR), and the purchase situation (SITUA), the interest value of the study scenario (INTER), and the adequacy the presented information for task performance (ADEQUAT). The scales were anchored by 1 (not realistic, not interesting, etc.) and 7 (very realistic, very interesting, etc). Table 15 summarizes the results for the study with anchor groups L3 and H respectively.

TABLE 15: Task Description Measures

	<u>Anchor L3</u>	<u>Anchor H</u>
DESCR	4.79	4.89
SITUA	3.43	3.35
INTER	3.92	4.18
ADEQUAT	4.77	4.69

The scores indicate that the subjects regarded the choice scenarios and stimuli descriptions as reasonably realistic, interesting, and adequate. However, the purchase

situation got only average ratings on realism. Perhaps the fact that the purchase situation required a compromise between something expensive (realistic for the upper income group but too expensive for the lower income group), and something relatively inexpensive (realistic for the lower income group but inappropriate for the upper income group), compromised the rated realism of the purchase situation. The ratings were stable across the study conditions.

The manipulation of relative ownership diffusion among the two social groups was tested using four 7-point scale items. A MANOVA analysis of these measures revealed that subjects had noted the statements regarding the different levels of ownership diffusion between the high and low conditions (Wilks' Lambda = 127.19,  $Pr > F = 0.0001$  when L3 was the anchor group; Wilks' Lambda = 45.1503,  $Pr > F = 0.0001$  when H was the anchor group).

The manipulation of social distance between groups was measured using three items. A series of MANOVA analyses showed that the subjects accurately perceived the changes in social distance between groups across the four conditions (Wilks' Lambda = 6.9514,  $Pr > F = 0.0001$  when L3 was the anchor group; Wilks' Lambda = 11.6132,  $Pr > F = 0.0001$  when H was the anchor group).

Next, we examined the aspirational appeal of the higher status group H. When L3 was the anchor group, there were four

higher status groups (L2, L1, H, and X) with the social distance between L3 and these groups changing across conditions. Using the items described earlier, the aspirational appeal of the higher status groups among the blue collar subjects was found to change with social distance. The subjects perceived differences in their degree of association with the different versions of the higher status group (Wilks' Lambda = 3.7474,  $Pr > F = 0.0015$ ) as well as with their aspirational appeal to them (Wilks' Lambda = 3.4982,  $Pr > F = 0.0339$ ).

Finally, when H was the anchor group, the social distance manipulation related to the four versions of the lower end group (L1, L2, L3, and L4). Here, the aspirational group H remained the same in all cases. We expected that regardless of the version of L, the aspirational appeal of H among the upscale professional subjects in the study would remain the same given their relatively close affiliation to joining it. Consistent with this expectation, the subjects' expressed affiliation with H (Wilks' Lambda = 0.2065,  $Pr > F = 0.9745$ ) as well as H's aspirational appeal (Wilks' Lambda = 0.3696,  $Pr > F = 0.8977$ ) remained the same irrespective of the version of L provided.

### 5.3.3 Hypothesis Tests

Our conceptual development in Chapter 4 indicated that relative brand diffusion in the social groups would generate

imitation or devaluation effects for the brand raising or lowering its attractiveness in a social group. We also expect the relative attractiveness to be influenced by social distance between the groups. a conceptually complete test needs to explore not only whether relative diffusion and social distance influence relative attractiveness, but also whether this influence is mediated by status symbolism (exclusivity or devaluation). Moreover, we must examine and discard an alternative hypothesis that the imitation and devaluation effects are mediated by changes in functional quality perceptions that influence relative product attractiveness. The three exclusivity measures as well as the three functional quality measures were highly correlated for both L3 and H subjects (see tables 16a, 16b, 17a and 17b).

TABLE 16a: Correlation Matrix of Exclusivity Measures  
for L3 Subjects

	EXCLUSIVITY	PRESTIGE	STATUS
EXCLUSIVITY	-		
PRESTIGE	0.6459	-	
STATUS	0.6493	0.6826	-



TABLE 16b: Correlation Matrix for Functional QualityMeasures for L3 Subjects

	FEATURES	QUALITY	PERFORMANCE
FEATURES	-		
QUALITY	0.6555	-	
PERFORMANCE	0.5718	0.6248	-

TABLE 17a: Correlation Matrix of Exclusivity Measuresfor H Subjects

	EXCLUSIVITY	PRESTIGE	STATUS
EXCLUSIVITY	-		
PRESTIGE	0.6513	-	
STATUS	0.6865	0.7592	-

TABLE 17b: Correlation Matrix for Functional QualityMeasures for H Subjects

	FEATURES	QUALITY	PERFORMANCE
FEATURES	-		
QUALITY	0.5673	-	
PERFORMANCE	0.4709	0.5394	-

The measures were subjected to a principal component analysis for each group to extract factors corresponding to the exclusivity and functional quality mediators. The first principal component extracted for each group was then used as an indicator of the corresponding mediator variable. The

percent of variation accounted by each of the four principal components in shown in Table 18.

TABLE 18: Percent of Variation Explained

By Principal Components

	<u>L3 Subjects</u>	<u>H Subjects</u>
Exclusivity	0.772	0.745
Functional Quality	0.800	0.684

Before testing the hypotheses formally, we present the means of the three attractiveness measures for all cells in the study. We first present in Table 19a the cell means for the conditions where L3 was the anchor group. this is followed by the cell means data for all conditions where H was the anchor group (Table 19b). Note that DES measures the desirability of Pheoton Monarch relative to the desirability of the Nigiren Royale on a seven point scale. DPNTS is the difference in the likelihood of purchase point allocation (Pheoton Monarch - Nigiren Royale). Finally, the third measure is the actual number of subjects that chose the Pheoton and the Royale respectively. Social distance is seen as increasing as the anchor group H is compared to L1, L2, L3, and L4 respectively. With L3 as the anchor group, social distance increases as L2, L3, H, and are the respective comparison groups.

TABLE 19a: Mean Attractiveness MeasuresL3 Subjects as Anchor Group

Cell	DES	DPNTS	CH Pheoton	CH Nigiren
------	-----	-------	------------	------------

---

High Diffusion in L3

Social

Distance

L3-L2	4.16	3.67	7	11
L3-L1	4.25	-12.50	7	5
L3-H	3.92	-5.57	6	8
L3-X	3.50	-20.33	3	9

Low Diffusion in L3

Social

Distance

L3-L2	4.07	7.69	5	8
L3-L1	4.64	13.57	9	5
L3-H	3.75	-1.67	5	7
L3-X	3.50	-11.67	3	9

TABLE 19b: Mean Attractiveness MeasuresH Subjects as Anchor Group

Cell	DES	DPNTS	CH Pheoton	CH Nigiren
------	-----	-------	------------	------------

---

High Diffusion in H

Social

Distance

H-L1	5.08	31.66	10	2
H-L2	4.27	15.09	8	3
H-L3	4.50	10.75	10	6
H-L4	4.07	3.23	7	6

Low Diffusion in H

Social

Distance

H-L1	4.45	10.18	7	4
H-L2	4.26	7.46	9	6
H-L3	4.00	2.72	6	5
H-L4	3.47	-16.94	3	14

We begin with tests of the five hypotheses directly for each of the three dependent variables. For each anchor group (L3 or H), we conduct an analysis of variance with the attractiveness measures as a function of relative diffusion and social distance. The three dependent variables are overall desirability of Pheoton relative to Nigiren (DES), relative likelihood of purchase of Pheoton to Nigiren

expressed as the difference in the 100 point allocation between Pheoton and Nigiren (DPNT = points for Pheoton - points for Nigiren), and the number of subjects choosing Pheoton and Nigiren (CH). For example, when testing H1 and H3 with the L3 subjects, the effects of relative diffusion and social distance on the dependent variable of relative desirability, are expressed by the model:

$$DES = f(\text{Relative Diffusion, Social Distance}).$$

The second step is to examine whether the exclusivity perceptions have a direct effect on the relative attractiveness measures. This is done by regressing the exclusivity principal component on the corresponding attractiveness measure. For example, when testing the effects of the exclusivity mediator (EXL3) on relative desirability for the L3 subjects, the model is:

$$DES = f(\text{EXL3}).$$

The third step tests for the hypothesized mediation of symbolic perceptions by exclusivity. The hypotheses tests in step 1 are repeated, incorporating the exclusivity principal component as an independent variable in the regression. For example, for the desirability measure in H1 and H3 for the L3 subjects the model is:

$$DES = f(\text{Relative Diffusion, Social Distance, EXL3}).$$

This test is only meaningful if both effects have been found to be significant on their own in steps 1 and 2. If the

effects of relative diffusion and social distance are not significant in this model, but the effects of the exclusivity mediator are, then we conclude that the relative diffusion and social distance effects are fully mediated by the exclusivity perceptions. If the effects of relative diffusion and social distance are significant even in the presence of the exclusivity mediator, we conclude that they are partially mediated by exclusivity perceptions.

Step four is similar to step 2, the difference being that we now test for the effects of the functional quality mediator on attractiveness (FQL3). This is done by regressing the functional quality principal component on the corresponding attractiveness measure. For example, when testing H1 and H3 for the desirability measure, the model is:

$$DES = f(FQL3).$$

Finally, step 5 is a test for hypothesis effects with mediation of functional quality perceptions. It is identical to step 3 except that functional quality perceptions are tested as the mediator rather than the exclusivity perceptions. The model for desirability in H1 and H3 for L3 subjects is:

$$DES = f(\text{Relative Diffusion, Social Distance, FQL3}).$$

We follow the above five steps for each hypothesis starting with hypotheses H1, H3, and H5 when L3 is the anchor

group. We then follow with hypotheses H2 and H4 when H is the anchor group. This section presents only the results of the tests and the conclusions in terms of the main and mediating effects. The discussion of these results follows in section 5.4.

#### H1, H3, and H5 Tests for L3 Anchor Group

Before testing for H1 and H3, we need to keep in mind that we have hypothesized that the effects of relative diffusion and social distance will grow up to a threshold of social distance between the L3 and the contrst group, and then will reverse themselves as hypothesized in H5. To identify this point we looked at the data in Table 19a to search for patterns in the data that would suggest such an inveerse U-shaped relationship. In general, one can see that the attractiveness for the brand is relatively low at the L3-L2 distance, increases as we move to the L3-L1 distance and then declines as we move to the L3-H and then to the L3-X distance (see Figures 9-11). The Figures 9, 10, and 11 indicate that brand attractiveness follows an ascending path from the L3-L2 point to the L3-L1 point, and then a descending path from the L3-L1 point to the L3-X point. Visually, these diagrams provide directional support forhypotheses H1, H3, and H5. To test them formally, we divided them in two groups. First, we tested hypotheses H1 and H3 for the data across the ascending path L3-L2 to L3-L1.

FIGURE 9: DES and Social Distance for L3 Anchor Group

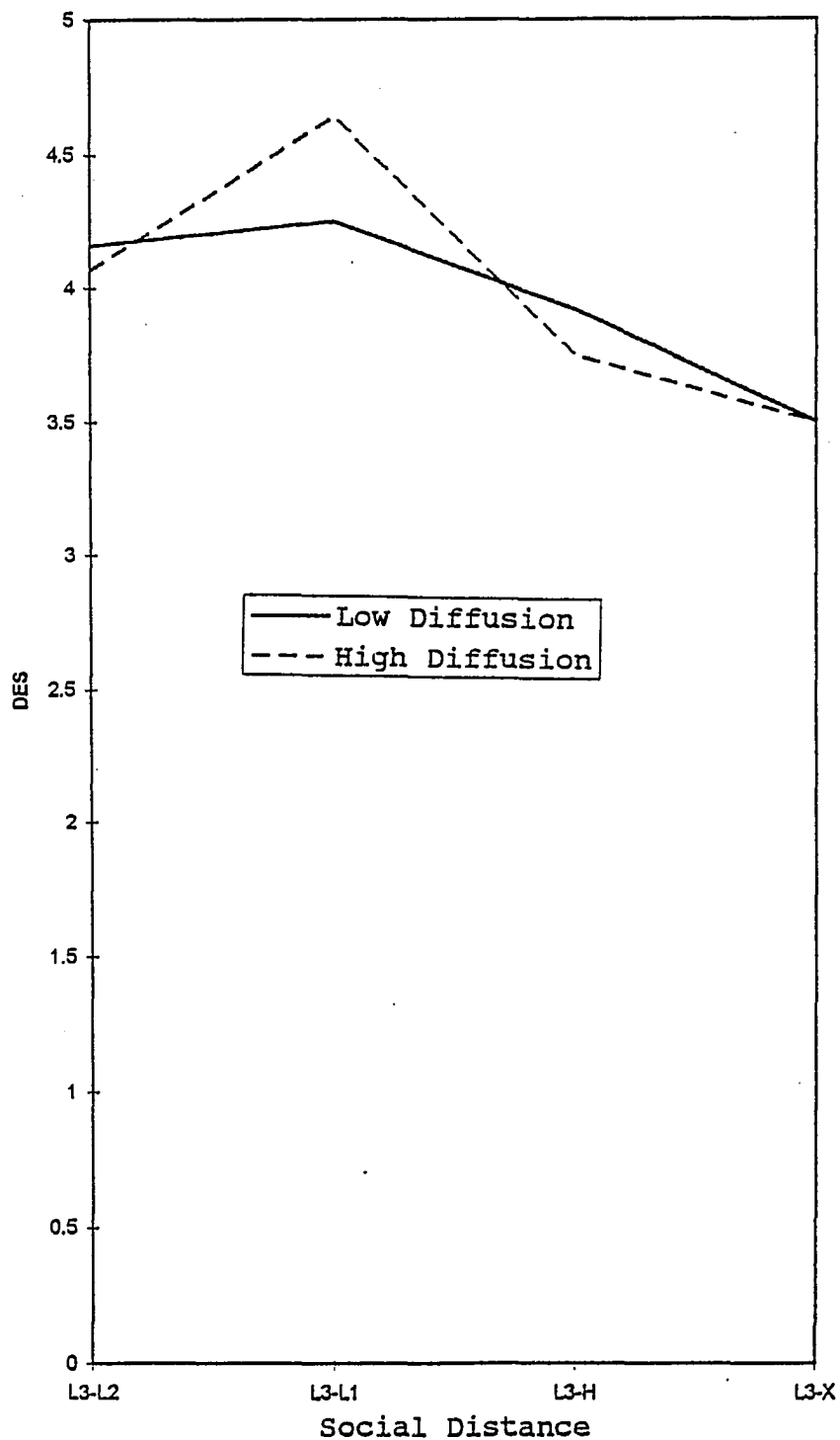




FIGURE 10: DPNTS and Social Distance for L3 Anchor Group

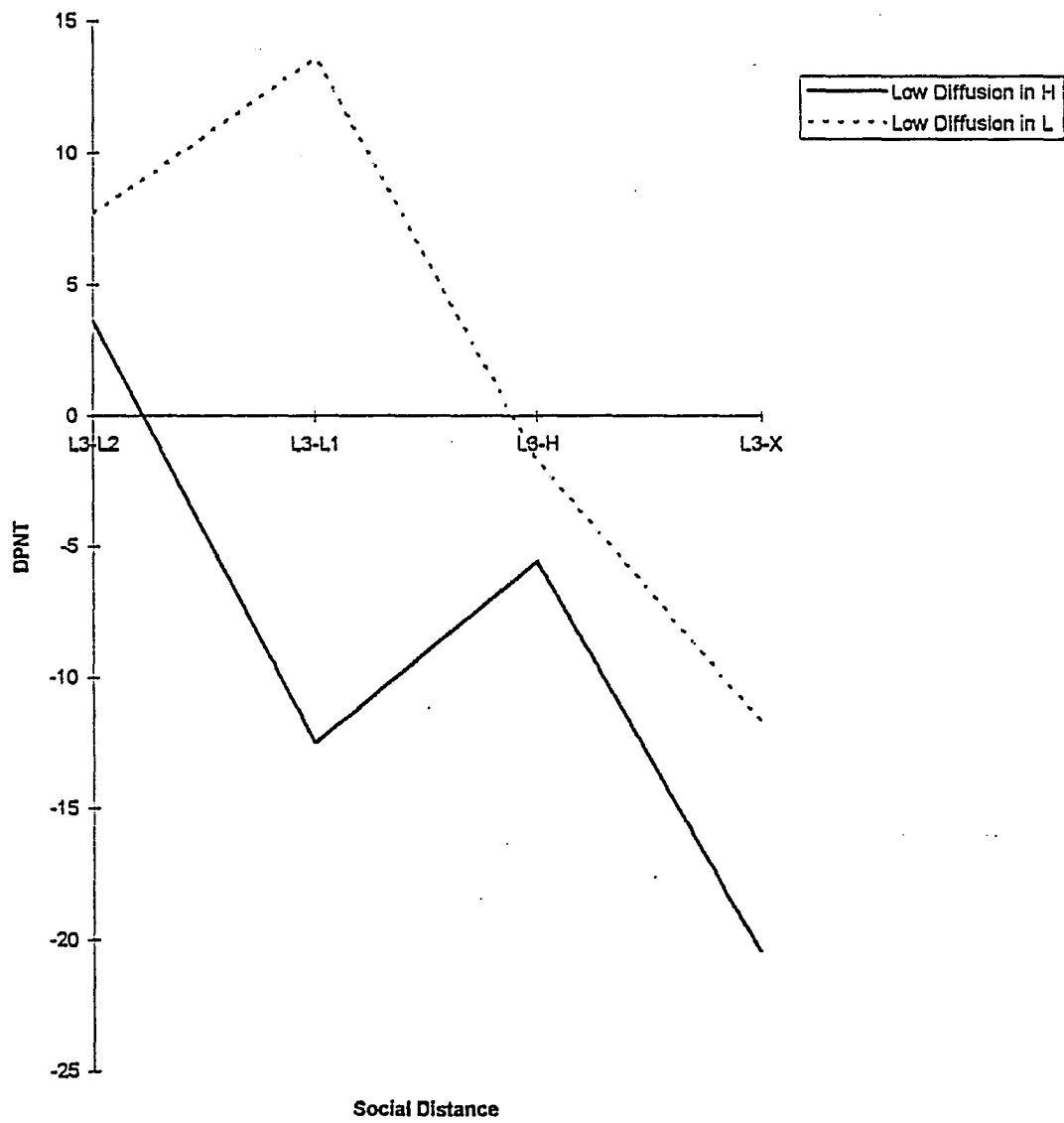
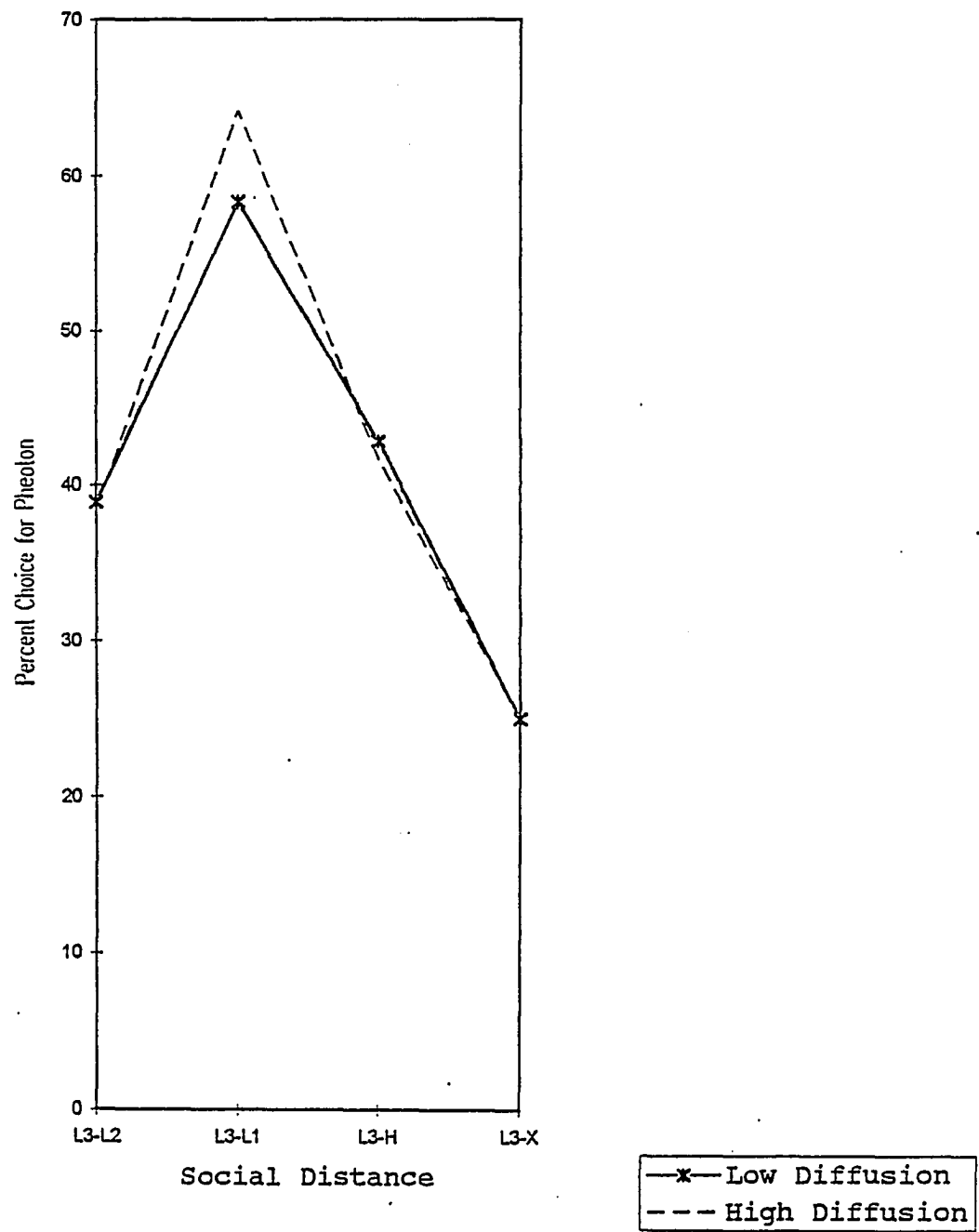


FIGURE 11: Choice and Social Distance for L3 Anchor Group



Finally, we tested Hypothesis H5 across the descending path L3-L to L3-X. Following the above mentioned 5 steps, we started with the tests for H1 and H3 for the desirability measure. Neither the effect of relative diffusion ( $F=0.15$ ,  $df=1,34$ ,  $Pr>F=0.7043$ ) nor the effect of social distance ( $F=0.82$ ,  $df=1,54$ ,  $Pr>F=0.3682$ ) were significant. No mediation tests were conducted given that there was no support for H1 and H2. The tests for the likelihood of purchase measure (DPNT) showed no significant effects of either the relative diffusion ( $F=1.32$ ,  $df=1,54$ ,  $Pr>F=0.2522$ ), or the social distance ( $F=0.2$ ,  $df=1,54$ ,  $Pr>F=0.652$ ). Consistent with the above results, the tests for choice showed no significant effects for relative diffusion (Chi-Square=0.04,  $df=1$ , Prob=0.8467) and social distance (Chi-Square=2.79,  $df=1$ , Prob=0.0951). No mediation tests were conducted.

We tested H5 along the L3-L1 to L3-X path. There was no significant effect of social distance for either the desirability measure ( $F=2.77$ ,  $df=2,72$ ,  $Pr>F=0.069$ ) or for the likelihood of purchase measure ( $F=1.02$ ,  $df=2,72$ ,  $Pr>F=0.3673$ ). No mediation tests were conducted. For the choice, the effect of social distance was significant (Chi-Square=6.42,  $df=2$ , Prob=0.0403). In step 2, we tested the effect of exclusivity perceptions (EXL3) on choice, and found it significant (Chi-Square 14.42,  $df=1$ , Prob=0.0001). In step 3 we included EXL3 in the model and tested for the effect of

social distance on choice. It was not significant (Chi-Square=4.73,  $df=2$ , Prob=0.0939). Thus, we conclude that the effect of social distance on choice as stated in H5 is fully mediated by exclusivity perceptions. We repeated steps 2 and 3 for the functional quality perceptions (FQL3). FQL3 had a significant effect in isolation (Chi-Square 17.34,  $df=1$ , Prob=0.0001). When it was included in the model, the effect of social distance on choice remained significant (Chi-Square=6.08,  $df=2$ , Prob=0.0479). This result indicated that the effect of social distance on choice as stated in H5 was partially mediated by functional quality perceptions.

Hypotheses Tests for H2 and H4.

H2 and H4 were tested based on the responses of the H subjects. Similar to Chapter 4, we tested and found that for all conditions, both the exclusivity perceptions (EXH) and the functional quality perceptions (FQH) had significant effects on all dependent measures at the 0.0001 level. Thus, we do not need to repeat steps 2 and 4 for each hypothesis test. The effects of relative diffusion ( $F=4.98$ ,  $df=1,101$ ,  $Pr>F=0.0411$ ) and social distance ( $F=3.85$ ,  $df=3,101$ ,  $Pr>F=0.0118$ ) on the desirability measure were significant. When EXH was included in the model, the effect of relative diffusion was not significant ( $F=1.21$ ,  $df=1,98$ ,  $Pr>F=0.2746$ ), whereas the effect of social distance ( $F=3.02$ ,  $df=3,98$ ,  $Pr>F=0.0335$ ) was significant. We concluded that EXH mediated

fully the effect of relative diffusion for the desirability measure, and partially the effect of social distance on the desirability measure.

Step 5 was conducted by adding FQH in the model. The effect of relative diffusion was marginal ( $F=3.68$ ,  $df=1,98$ ,  $Pr>F=0.0580$ ), and the effect of social distance was significant ( $F=3.88$ ,  $df=3,98$ ,  $Pr>F=0.0115$ ). Thus, the effects of relative diffusion and social distance on desirability were partially mediated by functional quality perceptions. We repeated the tests for H2 and H4 for the likelihood of purchase (DPNT) measure. The effects of both relative diffusion ( $F=4.72$ ,  $df=1,101$ ,  $Pr>F=0.0322$ ) and social distance ( $F=3.31$ ,  $df=3,101$ ,  $Pr>F=0.0232$ ) were significant for DPNT. When EXH was included in the model, neither the effect of relative diffusion ( $F=1.00$ ,  $df=1,98$ ,  $Pr>F=0.3194$ ) nor the effect of social distance ( $F=2.5$ ,  $df=3,98$ ,  $Pr>F=0.0641$ ) were significant. Thus, the effects of both relative diffusion and social distance on DPNT were fully mediated by exclusivity perceptions. When the same steps were repeated for FQH, we found that the effect of relative diffusion was marginal ( $F=3.72$ ,  $df=1,98$ ,  $Pr>F=0.0567$ ) and the effect of social distance was significant ( $F=3.00$ ,  $df=3,98$ ,  $Pr>F=0.0345$ ). Thus, functional quality perceptions mediated partially the effects of relative diffusion and social distance on the DPNT measure.

Consistent with the previous results, the effects of relative diffusion (Chi-Square=4.46, df=1, Prob=0.0348) as well as of social distance on choice (Chi-Square=9.46, df=3, Prob=0.0237) were significant. The mediation tests when EXH was included in the model showed that the effects of both relative diffusion (Chi-Square=0.95, df=1, Prob=0.33) and social distance (Chi-Square=5.88, df=3, Prob=0.1174) had no significant effects. Thus, the effects of relative diffusion and social distance on choice were fully mediated by exclusivity perceptions.

The mediation tests when FQH was included in the model showed that the effect of relative diffusion (Chi-Square=2.42, df=1, Prob=0.1194) was not significant whereas the effect of social distance (Chi-Square=8.51, df=3, Prob=0.0365) was significant. Thus, the effect of relative diffusion on choice was fully mediated by functional quality perceptions. On the other hand, the effect of social distance on choice was only partially mediated by functional quality perceptions. There was no interaction effect between relative diffusion and social distance for any of the five hypotheses. The results of all hypotheses and mediation tests are summarized in Table 20.

TABLE 20: Summary of Hypotheses and Mediating Variables Tests

		Hypothesis Support	Exclusivity Perception Mediation	Functional Quality Perception Mediation
-----				
H1:	DES	no	-	-
	DPNT	no	-	-
	CH	no	-	-
H2:	DES	yes	full	partial
	DPNT	yes	full	partial
	CH	yes	full	full
H3:	DES	no	-	-
	DPNT	no	-	-
	CH	no	-	-
H4:	DES	yes	partial	partial
	DPNT	yes	full	partial
	CH	yes	full	partial
H5:	DES	no	-	-
	DPNT	no	-	-
	CH	yes	full	partial

5.4. Discussion

The key idea in this study is that brands whose exclusivity depends on price can differentiate status between different groups of consumers. Their ability to differentiate status between the target group and outside group(s) as well

as within the outside group(s) depends on management setting a price which maintains the brand's exclusivity. Determining the optimal price for profit maximization has to take into account the interdependence of demand between the two groups due to imitation and devaluation effects.

Imitation Effects as Hypothesized in H1, H3 and H5

There was no support for hypotheses H1, H3, and only partial support for H5. For the choice variable which was supported in H5 we found mediating effects for exclusivity perceptions, supporting our reasoning that the status symbolism of the brand declines as the social distance between the two groups grows too wide. Although the data indicate directional support for H1, H3 and H5, there is no statistical significance. Two explanations are offered to account for these findings. The first is that the selected social group, i.e. successful blue-collar technicians and workers is not very status sensitive and do not attach particularly high status value to brands that are used by the described groups. They may in fact find brands less attractive as the social distance grows as demonstrated by the partial support for hypothesis H2b. This combined with the support for hypotheses H2 and H4 would indicate that upper middle class people such as the subjects in the study where H is the anchor group are more sensitive to status symbols and are more willing to invest in them than lower



middle class people. Support for this idea is given by the literature in sociolinguistic patterns of speech (Labov 1972, 1982). In his study of New York speech patterns and the way they spread through social groups of different status Labov (1972) found that "prestige" speech patterns do not always spread from the higher to the lower prestige groups. It shows that although lower status groups recognize these speech patterns as being prestigious, nevertheless they do not adapt them in their vernacular. This comes as a contradiction to Tarde's Law (1873) which states that borrowing always takes place from higher to lower prestige groups. In his experiments with groups in Harlem Labov finds that:

"Lower class speakers do not want to adopt the norms of the upper class; although they do endorse the dominant norms in the test situation, there are opposing sets of values that support the vernacular forms, and that do not appear in subjective reaction tests" (1972: pp. 313).

A similar phenomenon may be taking place here. Lower status groups may aspire to the success of the higher status groups without the desire to imitate their consumption patterns, especially if these are in opposition to their values.

Another explanation for the findings may be attributed to the relative lack of social homogeneity among the subjects who participated in the study with L3 as the anchor group

compared to the ones who participated in the study with H as the anchor group. Although the subjects in H varied in terms of income, age, and career stage, almost all of them (96 out of 106) either had or were in the process of getting a graduate degree in business. The same proportion either were working in managerial positions or were expecting to get such a job upon completion of their degree. Thus, the degree of association of the subjects with a certain professional and social lifestyle was relatively homogeneous. On the other hand, the subjects in L came from a very wide range of blue collar type of jobs and job settings. Their average age as well as the age variation was larger than the subjects in H, and they operated socially and professionally in many different environments. Thus, the lack of statistical support despite the directional support for the first two hypotheses may be attributed to the fact that the subjects did not all "speak the same consumption language" and thus their interpretations of the brand's diffusion among other social groups were too diverse.

#### Devaluation Effects as Hypothesized in H2 and H4

The devaluation effects, in other words what Goffman (1951) called the process of a status-conveying brand becoming a "fraudulent symbol", were demonstrated in the support for hypotheses H2 and H4. As the social distance

between the two groups grows and the relative brand diffusion in L increases, the brand becomes less attractive for members of H. In the case of H2 which looks at the effects of increasing relative brand diffusion in L, we find that for all three preference variables the results are fully mediated by exclusivity perceptions. This is consistent with the idea of "devaluation", where the brand loses its ability to discriminate status between the two groups. We also find full mediating effects of functional quality perceptions for the choice variable. These results show that to some extent, subjects in H associate high relative diffusion in L with lower functional quality of the brand. Thus, who buys the brand may affect the perceptions of the brand's functional quality in addition to its ability to convey status. Nevertheless, the functional quality mediation is full in only one of the three attractiveness variables, so we conclude, consistent with our expectations that the primary mediation is due to exclusivity perceptions.

In the case of H4 which looks at the effects of increasing social distance between H and L on the attractiveness of the brand among members of H we found that the effects are fully mediated by exclusivity perceptions for the likelihood of purchase and for the choice variable, but not for the relative desirability. The mediation of exclusivity perceptions reflects the decline of the brand's

status and prestige due to its reduced ability to discriminate status between the two groups. This was similar to the exclusivity mediation for hypothesis H2. Unlike hypothesis H2, there was full mediation of functional quality perceptions for any of the three attractiveness measures for H4. This is consistent with our expectations based on the literature.

The study has demonstrated that an exclusive brand which is targeted for a certain group will lose its appeal once it is adopted by outside groups that are perceived by the target group as being of lesser status. Even without any imitation effects that would make the brand more desirable to the lower status group, there is an interdependence in the brand's diffusion among the two groups, especially the diffusion of the brand in the target group as a function of the brand's availability and acquisition in the lower group and the perceived social distance between the two groups. Managers need to design pricing strategies keeping in mind that there is an interdependence of the demand in these groups and that the optimal price trades off demand in one group for another.

## 6. SUMMARY OF RESULTS AND FUTURE RESEARCH

In this section we summarize briefly the key results of both studies. Following this, we identify the questions that were raised by the studies and which should be addressed in future research. Finally, we also look at additional issues related to the topic of brand exclusivity which can be a part of future research.

### *Exclusivity based on Limited Supply*

The first study showed that a lower end extension of a limited edition brand is preferred more than an extension of a brand without any supply limitations. The effects are stronger when this association takes place in a market segment where consumers are driven primarily by symbolic motivation as opposed to utilitarian motivation for their consumption. This holds true for both stimuli, wine and watches. The same scenario yields stronger effects for segments where the consumption situation is public as opposed to segments where the consumption situation is private. This, however, is the case with the wine stimuli, but not with the watches stimuli.

The findings suggest that other product category differences besides consumption motivation and situation may moderate the extend of the supply limitation effect. These

differences will have to be explored in future research.

Additional future research based on the above model includes potential extensions on both supply side and demand side. In terms of supply side extensions, one can relax the assumption of mutual independence of the unit cost for the upper end brand  $C_H$  and the unit cost for the low end brand  $C_L$ . This, combined with  $C_H = f(Q_H)$  and  $C_L = f(Q_L)$  will result in different optimal supply levels and thus different normative implications for managers.

In terms of demand side extensions, one can look at the effects of the social distance between the targeted groups for H and L respectively. The assumption in this paper is that the line extension does not negatively affect the upper end exclusive brand. Thus, the extension is within the "optimal range." One can examine the case where the social distance  $d$  between the two groups affects the way the variables  $u$  and  $s$  influence  $\eta$ . As the social distance increases, negative reciprocity effects may occur where the lower end brand benefits from the extension, but the upper end brand suffers from it. This does not necessarily imply that a lower end extension is unreasonable. In some cases where the net total profits may be higher even with negative reciprocity effects relative to when separate brand names are used for the upper end and lower end brands. Dynamic modeling approaches such as the predator-prey model (Burghes 1975;

Hausrath 1975; Dreyer 1993) can be readily adapted to examine key phenomena.

Other topics for future research are related to the type of competition in markets for products which function as status symbols. The number of brands within each product category that can be perceived as status symbols by most consumers may be limited. This would produce a zero sum game type of competition for these limited number of symbolic status positions in a market. A game theoretical approach may be developed to explore such situations.

#### Exclusivity based on High Price

The second study demonstrated that an exclusive brand which is targeted for a certain group, and whose exclusivity is based on price will lose its appeal if the price is not high enough to prevent its adoption by outside groups that are perceived by the target group as being of lesser status. This loss of appeal, or "brand devaluation" is stronger the longer the social distance between the target group and the outside group grows, and the higher the brand is diffused in the outside group relative to the target group.

On the other hand, the hypotheses about imitation effects of the lower status groups were not supported. One explanation that was offered states that the lower income groups may not share the values of the higher income groups

and thus do not aspire to imitate their consumption pattern. This should be further explored in future research. Questions about this lack of imitation effects may be a function of particular social characteristics of certain groups, or a function of only certain types of consumer goods. The second explanation is that the selected lower status group was not homogeneous enough in terms of job type and experience. Future research should replicate the study by using very homogeneous blue collar subjects in terms of their job characteristics, skills, experience, and status.

Other areas of future research could include manipulations of price and supply timing. In the proposed diffusion model we assume that once the price is set, it remains constant. A model extension allowing management to alter the price in response to the consumers' perceptions of brand exclusivity. Thus, the optimization problem would be to determine the optimal price path as opposed to just the optimal price.

The model also assumes that the brand is introduced simultaneously to both populations H and L. An extension of that would be to allow management to control the timing of brand release to the different groups (e.g. through different release of the brand in different distribution channels). Thus, the dynamics in the model would change in terms of initial brand exclusivity perceptions.



Finally, competition could be included, thus allowing for a more holistic scenario of the way the market for status symbols operates. In a model that includes competitors who also manipulate the exclusivity of their brands, a game theoretical approach may be the best way to investigate this kind of market.

APPENDIX ABACKGROUND

As marketing researchers, we are very interested in developing research techniques that help us understand the market potential for new products. The purpose of this study is to test some market research techniques that will help determine consumer reactions to products before they are actually test marketed or launched.

These research techniques can result in better and quicker identification of consumer acceptance of new products and can save millions of dollars for companies that use them prior to new product development and introduction. This not only improves the company's profitability, but also lowers the prices that consumers pay for new products by eliminating wasteful expenditures on products that consumers do not like. For these reasons, it is important that you review and follow the study instructions carefully.

Because we do not want actual brand names to affect the study results, all the brand names used in the study are fictitious. However, the products described are based on real products and represent the types of choices that are actually available in the marketplace. Consequently, we would like you to imagine that you are the consumer in the product purchase situation described and respond accordingly.

Please carefully read the study instructions. After you have completed reading them, please turn to the enclosed questionnaire and answer the questions as indicated. There are no right or wrong answers and we are primarily interested in how you feel you would respond in that situation.

Thank you very much for your cooperation. Please turn the page and read the next set of task instructions.

APPENDIX B

ACC

THE PHEOTON WATCH LINE

The **Pheoton Watch Company** was established in Switzerland in 1832. The company has a long tradition of superbly designed and manufactured watches and is known for its unwavering commitment to quality and for its consistent pursuit of excellence. Pheoton owners provide loyal testimony to the performance and quality image of the watches.

The two Pheoton watches that you are considering for your brother are described below:

**The Pheoton Monarch** represents the top of the Pheoton line and incorporates the latest technology in watch manufacturing. The company name and the exquisite design reflects quality and projects an image that fits the most formal occasions. The **Monarch** also offers the performance features that meet the exacting demands of most sports enthusiasts.

The **Monarch** has over 200 hand-assembled precision parts and is extraordinarily resistant to heat and corrosion. Its screwed down crown guarantees moisture protection and the watch is tested and certified to be waterproof and able to withstand pressures upto a depth of 600 feet. The fine mechanical movement features an 18 ruby construction and the watch offers a 40-hour power reserve.

The ultra thin design is so integrated that is impossible to tell where the case begins. The hardened mineral crystal is scratch-resistant and is surrounded by a unidirectional notched rotating bezel. The sculpted bracelet, made out of stainless steel and gold accentuates the classic elegance of the watch.

The **Pheoton Monarch** indicates time, day, date and moonphase in its normal mode. In addition, it offers a state-of-the-art chronometric mode with multiple timing options accurate to one-hundreths of a second. The **Monarch** retails for \$699.95 at specialty watch dealers.

**The Pheoton Chronometer** is another versatile product in the Pheoton Watch Company line. The watch is elegantly designed and provides the precision and endurance characteristics desirable in a quality watch.

The watch incorporates a precision quartz movement in a case tested to be water resistant to over 325 feet. The steel and ceramic case coupled with a high-quality scratch-resistant crystal face represents a recent innovation in design technology. The bracelet is made out of high quality hand-sewn leather. The watch face shows hours, minutes, seconds and date and offers a chronometer that keeps accurate track of elapsed time to one-hundreths of a second. The **Pheoton Chronometer** retails for \$219.95.

#### THE NIGIREN WATCH LINE

**Nigiren Gmbh** is a 150-year old Swiss watchmaker. The company is family-owned and operated and its watches convey its tradition of quality and excellence in manufacturing and design. Nigiren owners proudly point to the handsome designs and quality image of their watches and testify to their remarkable performance and durability.

The two Nigiren watches that you are considering for your brother are described below:

**The Nigiren Royale** is the company's top-of-the-line watch and is the latest in a long tradition of quality watch manufacturing. The Nigiren line has always featured superb quality and its image is synonymous with elegance. The **Royale's** elegance is complemented by performance features tuned to the needs of the most demanding sportsman.

The **Royale** has 218 precision parts delicately hand-assembled and is highly resistant to corrosion and high temperatures. It has a protective crown that is capped with a cabochon sapphire that conceals the stem. The bezel is unidirectional and the luminous hands turn on a mechanical movement that is based on a 18-ruby mechanism. A unique winding stem activates a 40-hour power reserve. The watch is tested and certified to be waterproof and can withstand the pressure at depths of over 600 feet.

The watch face has a scratch-proof mineral crystal and is seamlessly merged with the case. The bracelet is meticulously hand-crafted in stainless steel and gold and complements the watch's elegant design.

The **Nigiren Royale** indicates time, date and day or night in any time zone. Its chronometric mode offers multiple timing options accurate to one-hundreths of a second. The **Royale** is priced at \$689.99 at leading watch retailers.

**The Nigiren Timestar** is another reliable product in the Nigiren Gmbh line of watches. The design is elegant and an innovative technology provides the accuracy and durability features that are valued in a quality watch. The watch has a high technology steel case that is tested to be water resistant to 350 feet. The quality quartz movement guarantees accurate timekeeping and the scratch-resistant sapphire crystal face is a design innovation. The watch is complemented by a hand-sewn, natural leather bracelet. In addition to displaying hours, minutes, seconds, day and date in its normal mode, the watch offers a chronometer mode that accurately tracks elapsed time to one-hundreths of a second. The **Nigiren Timestar** retails for \$224.95.

APPENDIX C

ATR

THE PHEOTON WATCH LINE

The Pheoton Watch Company was established in Switzerland in 1832. The company has a long tradition of superbly designed and manufactured watches and is known for its unwavering commitment to quality and for its consistent pursuit of excellence. Pheoton owners provide loyal testimony to the performance and quality image of the watches.

The two Pheoton watches that you are considering for your brother are described below:

The **LIMITED EDITION Pheoton Monarch** represents the top of the Pheoton line and incorporates the latest technology in watch manufacturing. By company policy, only 300 of these watches are made and distributed through Pheoton's original dealer in Geneva. The company name and the exquisite design reflects quality and projects an image that fits the most formal occasions. The **LIMITED EDITION Monarch** also offers the performance features that meet the exacting demands of most sports enthusiasts.

The **LIMITED EDITION Monarch** has over 200 hand-assembled precision parts and is extraordinarily resistant to heat and corrosion. Its screwed down crown guarantees moisture protection and the watch is tested and certified to be waterproof and able to withstand pressures upto a depth of 600 feet. The fine mechanical movement features an 18 ruby construction and the watch offers a 40-hour power reserve.

The ultra thin design is so integrated that is impossible to tell where the case begins. The hardened mineral crystal is scratch-resistant and is surrounded by a unidirectional notched rotating bezel. The sculpted bracelet, made out of stainless steel and gold accentuates the classic elegance of the watch. Each of the 300 **LIMITED EDITION Pheoton Monarch** watches has its serial number specially engraved on the reverse of the case.

The **LIMITED EDITION Pheoton Monarch** indicates time, day, date and moonphase in its normal mode. In addition, it offers a state-of-the-art chronometric mode with multiple timing options accurate to one-hundredths of a second. The **LIMITED EDITION Monarch** retails for \$699.95 at specialty watch dealers.

The **Pheoton Chronometer** is another versatile product in the Pheoton Watch Company line. The watch is elegantly designed and provides the precision and endurance characteristics desirable in a quality watch. The watch incorporates a precision quartz movement in a case tested to be water resistant to over 325 feet. The steel and ceramic case coupled with a high-quality scratch-resistant crystal face represents a recent innovation in design technology. The bracelet is made out of high quality hand-sewn leather. The watch face shows hours, minutes, seconds and date and offers a chronometer that keeps accurate track of elapsed time to one-hundredths of a second. The **Pheoton Chronometer** retails for \$219.95.

APPENDIX D

ARF

TASK INSTRUCTIONS

You and your brother have always had a very warm and close relationship and are not only siblings but best friends. His 30th birthday is coming up and you have decided to give him a very nice gift to mark the occasion.

Your brother is an extremely dedicated athlete who runs a fast-paced three miles alone every evening on a difficult trail near his house. He is a very private person who prefers solitary activities such as running alone over group activities and his lifestyle and personal possessions reflect his privacy orientation.

In some recent conversations, he has mentioned his long-standing desire to own a high quality watch. After considerable thought and consideration of his tastes, you decide to buy him a high quality watch as his 30th birthday gift.

You know that your brother's running is associated with his self image as a serious athlete and the items in his running ensemble emphasize performance. He reinforces this self image with himself by maintaining and reviewing a "training diary" in which he records the time associated with his daily runs. Hence, you believe that his primary value for the watch would be to keep time accurately.

You have visited several specialty watch stores. Finally, after significant search, you have narrowed your options to two watches in the **Pheoton** line and two watches in the **Nigiren** line. The following descriptions of the watches are drawn from the product brochures that you obtained from the dealer.

AUF

TASK INSTRUCTIONS

You and your brother have always had a very warm and close relationship and are not only siblings but best friends. His 30th birthday is coming up and you have decided to give him a very nice gift to mark the occasion.

Your brother is an extremely dedicated athlete who runs a fast-paced three miles with a group of colleagues every evening on a difficult trail near his house. He is a very sociable person who prefers group activities such as running with his colleagues over solitary activities and his lifestyle and personal possessions reflect his sociable orientation.

In some recent conversations, he has mentioned his long-standing desire to own a high quality watch. After considerable thought and consideration of his tastes, you decide to buy him a high quality watch as his 30th birthday gift.

You know that your brother's running is associated with his self image as a serious athlete and the items in his running ensemble emphasize performance. He projects this self image to his colleagues by maintaining and discussing a "training diary" in which he records the time associated with his daily runs. Hence, you believe that his primary value for the watch would be to keep time accurately.

You have visited several specialty watch stores. Finally, after significant search, you have narrowed your options to two watches in the Pheoton line and two watches in the Nigiren line. The following descriptions of the watches are drawn from the product brochures that you obtained from the dealer.

ARS

**TASK INSTRUCTIONS**

You and your brother have always had a very warm and close relationship and are not only siblings but best friends. His 30th birthday is coming up and you have decided to give him a very nice gift to mark the occasion.

Your brother is an amateur jogger who runs a leisurely three miles alone every evening on a park trail near his house. He is a very private person who prefers solitary activities such as running alone over group activities and his lifestyle and personal possessions reflect his privacy orientation.

In some recent conversations, he has mentioned his long-standing desire to own a high quality watch. After considerable thought and consideration of his tastes, you decide to buy him a high quality watch as his 30th birthday gift.

You know that your brother's running is associated with his self image as a person of good taste and the items in his running ensemble emphasize this self image. He reinforces this self-image with himself by attending to the style and appearance of the equipment he uses for his daily runs. Hence, you believe that his primary value for the watch would be to reinforce his good taste to himself.

You have visited several specialty watch stores. Finally, after significant search, you have narrowed your options to two watches in the **Phecton** line and two watches in the **Nigiren** line. The following descriptions of the watches are drawn from the product brochures that you obtained from the dealer.



AUS

TASK INSTRUCTIONS

You and your brother have always had a very warm and close relationship and are not only siblings but best friends. His 30th birthday is coming up and you have decided to give him a very nice gift to mark the occasion.

Your brother is an amateur jogger who runs a leisurely three miles alone every evening on a park trail near his house. He is a very sociable person who prefers group activities such as running with his colleagues over solitary activities and his lifestyle and personal possessions reflect his sociable orientation.

In some recent conversations, he has mentioned his long-standing desire to own a high quality watch. After considerable thought and consideration of his tastes, you decide to buy him a high quality watch as his 30th birthday gift.

You know that your brother's running is associated with his self image as a person of good taste and the items in his running ensemble emphasize this self image. He projects this self image to his colleagues by attending to and discussing the style and appearance of the equipment he uses for his daily runs. Hence, you believe that his primary value for the watch would be to project his good taste to his colleagues.

You have visited several specialty watch stores. Finally, after significant search, you have narrowed your options to two watches in the **Phaeton** line and two watches in the **Nigiren** line. The following descriptions of the watches are drawn from the product brochures that you obtained from the dealer.

ACC

**TASK INSTRUCTIONS**

You and your brother have always had a very warm and close relationship and are not only siblings but best friends. His 30th birthday is coming up and you have decided to give him a very nice gift to mark the occasion.

In some recent conversations, he has mentioned his long-standing desire to own a high quality watch. After considerable thought and consideration of his tastes, you decide to buy him a high quality watch as his 30th birthday gift.

You have visited several specialty watch stores. Finally, after significant search, you have narrowed your options to two watches in the **Pheoton** line and two watches in the **Nigiren** line. The following descriptions of the watches are drawn from the product brochures that you obtained from the dealer.

APPENDIX E

ICC

THE CHATEAU ADELE WINES

The **Chateau Adele Winery** is a family operated company that produces some of the best wine in France. Located on the northern slopes of the Reneu valley in southern France, it has been a quality wine producer since 1832. The dry climate combined with the cool winds from the north ripens the grapes slowly and evenly, resulting in superb wines.

The two Chateau Adele wines that you are considering for your colleague are described below:

The **1988 Chateau Adele Cabernet Sauvignon** is the top of the line of Chateau Adele wines. It has an unusual purity of fruit and a supple texture that makes it unique. Its opaque purple color suggests the depth of the wine. Perfect balance and concentration of all elements - ripe fruit, oak, acid and tannin - provide depth and length in an opulent wine.

The **1988 Chateau Adele Cabernet Sauvignon** is stylish but does not appear "new" or "stylized." It actually feels like it is old-style since the character of the earth shows up in the finish, creeping out from behind the awesome size of the wine. A classic, the wine has won many awards and retails at specialty wine dealers for \$41.95.

The **1990 Chateau Adele Merlot** is another fine wine from the Chateau Adele winery. It is a distinctive Merlot, perfectly balanced, and with a deep and inky color. The deep, earthy aroma is complex and brooding. In the mouth the wine is smooth and large in taste with a muscular fruit component and spicy earthy character. The lingering finish gives you time to think about how pleasant this multifaceted wine is. It retails for \$10.95.

### THE CLEOS ESTATE WINES

The Cleos Estate Winery is a family business and has a reputation as a top French wine producer. The winery is located in the northwest slope of the Louron valley in southeastern France, and has produced high quality wines for over 150 years. The climate is dry with occasional foggy winds coming from the sea. As a result, the grapes take a long time to ripen. This slow process reduces uneven ripening and thus produces wines of consistently superior quality.

The two Cleos Estate wines that you are considering for your colleague are described below:

**The 1988 Cleos Estate Cabernet Sauvignon** is an outstanding wine and represents the very best of the Cleos Estate winery. This truly sensational Cabernet Sauvignon reveals itself like a carefully-timed wave of fruit. The color is a dark purple all the way to the rim of the glass. Ripe berry aromas blend into a complex and ethereal nose of herbs and new oak scents.

Deeply ripe, fat and mellifluous, the 1988 Cleos Estate Cabernet Sauvignon maintains an impeccable balance. Generous complex fruit flavors line the finish, surrounded by firm tannins. Complex and voluptuous in the mouth, it shows a layering of flavors that persists for minutes in the ripe aftertaste. An international award winning wine, it is available at leading wine dealers for \$41.50.

**The 1990 Cleos Estate Merlot** is another quality wine from the Cleos Estate winery. The intensity of this deep purple wine expresses the full-bodied texture that is to come. High amplitude French oak aromas blend with fruit in an excellent balance. Elegant, but still youthful in its tannic structure, the fruit flavors start well and carry all the way through. Supple texture, complex flavors, built to last. It retails for \$10.50.

APPENDIX F

ITR

THE CHATEAU ADELE WINES

The **Chateau Adele Winery** is a family operated company that produces some of the best wine in France. Located on the northern slopes of the Reneu valley in southern France, it has been a quality wine producer since 1832. The dry climate combined with the cool winds from the north ripens the grapes slowly and evenly, resulting in superb wines.

The two Chateau Adele wines that you are considering for your colleague are described below:

The **LIMITED EDITION 1988 Chateau Adele Cabernet Sauvignon** is the top of the line of Chateau Adele wines. It has an unusual purity of fruit and a supple texture that makes it unique. Its opaque purple color suggests the depth of the wine. Perfect balance and concentration of all elements - ripe fruit, oak, acid and tannin - provide depth and length in an opulent wine. By company policy, only 400 cases of the **LIMITED EDITION 1988 Chateau Adele Cabernet Sauvignon** are made available for distribution through the company's original French dealer.

The **1988 Chateau Adele Cabernet Sauvignon** is stylish but does not appear "new" or "stylized." It actually feels like it is old-style since the character of the earth shows up in the finish, creeping out from behind the awesome size of the wine. A classic, the wine has won many awards and retails at specialty wine dealers for \$41.95. Each of the 4800 limited edition bottles bears an individual serial number on the label.

The **1990 Chateau Adele Merlot** is another fine wine from the Chateau Adele winery. It is an distinctive Merlot, perfectly balanced, and with a deep and inky color. The deep, earthy aroma is complex and brooding. In the mouth the wine is smooth and large in taste with a muscular fruit component and spicy earthy character. The lingering finish gives you time to think about how pleasant this multifaceted wine is. It retails for \$10.95.

APPENDIX G

IRF

TASK INSTRUCTIONS

You and a colleague have been working together for some time and have developed a cordial relationship over the years. His next birthday is coming up and you have decided to mark the occasion with a nice gift.

Your colleague is a bachelor who lives by himself, keeps his apartment in good shape, and is also an accomplished cook. He is a very private person who prefers solitary activities such as dining alone over throwing larger dinner parties. His lifestyle and hobbies reflect his privacy orientation. Thus, he enjoys spending time at home preparing tasty dishes for his solitary dinners.

Along with his love for cooking, you know that your colleague enjoys good wine. After consideration of his tastes and preferences, you decide to buy him a bottle of fine wine as a birthday gift.

You know that your colleague's self image is one of a competent, performance-oriented person. His cooking, which focuses on simple, tasty dishes for himself reinforces this self-image. You feel that he would value a bottle of wine that he could drink at one of his solitary dinners. Thus, you believe that his primary value for the wine would be its compatibility with the simple, tasty meals he would typically cook for himself.

You visit your local specialty wine store. After some searching, you have narrowed your options to wines from two well-known wineries: the **Cleos Estate Winery** and the **Chateau Adele Winery**. The following descriptions of the wines are drawn from wine catalogs that you obtained from the dealer.

IUF

**TASK INSTRUCTIONS**

You and a colleague have been working together for some time and have developed a cordial relationship over the years. His next birthday is coming up and you have decided to mark the occasion with a nice gift.

Your colleague is a bachelor who lives by himself, keeps his apartment in good shape, and is also an accomplished cook. He is a very sociable person who prefers group activities such as throwing large dinner parties over dining alone. His lifestyle and hobbies reflect his sociable orientation. Thus, he enjoys entertaining at home by preparing tasty dishes for his dinners with his friends.

Along with his love for cooking, you know that your colleague enjoys good wine. After consideration of his tastes and preferences, you decide to buy him a bottle of fine wine as a birthday gift.

You know that your colleague's self image is one of a competent, performance-oriented person. His cooking, which focuses on simple, tasty dishes for his friends, projects this self-image. You feel that he would value a bottle of wine that he could drink at dinner with his friends. Thus, you believe that his primary value for the wine would be compatibility with the simple, tasty meals he would typically cook for his friends.

You visit your local specialty wine store. After some searching, you have narrowed your options to wines from two well-known wineries: the **Cleos Estate Winery** and the **Chateau Adele Winery**. The following descriptions of the wines are drawn from wine catalogs that you obtained from the dealer.

IRS

TASK INSTRUCTIONS

You and a colleague have been working together for some time and have developed a cordial relationship over the years. His next birthday is coming up and you have decided to mark the occasion with a nice gift.

Your colleague is a bachelor who lives by himself, keeps his apartment in good shape, and is also an accomplished cook. He is a very private person who prefers solitary activities such as dining alone over throwing larger dinner parties. His lifestyle and hobbies reflect his privacy orientation. Thus, he enjoys spending time at home preparing tasty dishes for his solitary dinners.

Along with his love for cooking, you know that your colleague enjoys good wine. After consideration of his tastes and preferences, you decide to buy him a bottle of fine wine as a birthday gift.

You know that your colleague's self image is one of a person of refined taste. His cooking, which focuses on elaborate, exotic dishes for himself reinforces this self-image. You feel that he would value a bottle of wine that he could drink at one of his solitary dinners. Thus, you believe that his primary value for the wine would be its compatibility with the elaborate and exotic meals he would typically cook for himself.

You visit your local specialty wine store. After some searching, you have narrowed your options to wines from two well-known wineries: the **Cleos Estate** Winery and the **Chateau Adele** Winery. The following descriptions of the wines are drawn from wine catalogs that you obtained from the dealer.



IUS

TASK INSTRUCTIONS

You and a colleague have been working together for some time and have developed a cordial relationship over the years. His next birthday is coming up and you have decided to mark the occasion with a nice gift.

Your colleague is a bachelor who lives by himself, keeps his apartment in good shape, and is also an accomplished cook. He is a very sociable person who prefers group activities such as throwing large dinner parties over dining alone. His lifestyle and hobbies reflect his sociable orientation. Thus, he enjoys entertaining at home by preparing tasty dishes for his dinners with his friends.

Along with his love for cooking, you know that your colleague enjoys good wine. After consideration of his tastes and preferences, you decide to buy him a bottle of fine wine as a birthday gift.

You know that your colleague's self image is one of a person of refined taste. His cooking, which focuses on elaborate, exotic dishes for his friends, projects this self-image. You feel that he would value a bottle of wine that he could drink at one of his dinners with his friends. Thus, you believe that his primary value for the wine would be its compatibility with the elaborate and exotic meals he would typically cook for his friends.

You visit your local specialty wine store. After some searching, you have narrowed your options to wines from two well-known wineries: the **Cleos Estate Winery** and the **Chateau Adele Winery**. The following descriptions of the wines are drawn from wine catalogs that you obtained from the dealer.

ICC

**TASK INSTRUCTIONS**

You and a colleague have been working together for some time and have developed a cordial relationship over the years. His next birthday is coming up and you have decided to mark the occasion with a nice gift.

Your colleague is a bachelor who lives by himself, keeps his apartment in good shape, and is also an accomplished cook. Along with his love for cooking, you know that your colleague enjoys good wine. After consideration of his tastes and preferences, you decide to buy him a bottle of fine wine as a birthday gift.

You visit your local specialty wine store. After some searching, you have narrowed your options to wines from two well-known wineries: the **Cleos Estate Winery** and the **Chateau Adele Winery**. The following descriptions of the wines are drawn from wine catalogs that you obtained from the dealer.

APPENDIX H  
QUESTIONNAIRE

PART A

After considering the watches described earlier, you realize that your budget will not permit you to spend over \$250 on the watch for your brother. This makes it impossible for you to consider either the Pheoton Monarch or the Nigiren Royale. Thus, you recognize that your decision is limited to the Pheoton Chronometer and the Nigiren Timestar.

We would like you to keep in mind your assessment of your brother's needs, tastes and preferences as described earlier. When answering questions, please feel free to go to previous sections and review the task descriptions.

1. Please rate the desirability of the Pheoton Chronometer relative to the Nigiren Timestar. Circle the number that best represents your judgment.

Less	1	2	3	4	5	6	7	More
Desirable								Desirable

2. We would like you to divide 100 points between the Pheoton Chronometer and the Nigiren Timestar such that the division reflects the likelihood of your purchasing each watch. For example, if you are certain that you would buy the Pheoton Chronometer and there is no chance of your buying the Nigiren Timestar, your point allocation should be Pheoton Chronometer = 100; Nigiren Timestar = 0. If you are indifferent between the two watches, you should assign 50 points to each. Other divisions would reflect different likelihoods of purchase.

Pheoton Chronometer	
Nigiren Timestar	

3. Which one of the two watches would you choose for your brother ? Check only one of the two options.

Pheoton Chronometer	
Nigiren Timestar	

PART B

4. Please provide your overall assessment of the features of the Pheoton Chronometer relative to the Nigiren Timestar. Circle the number that best represents your judgment.

Worse Features	1	2	3	4	5	6	7	Better Features
----------------	---	---	---	---	---	---	---	-----------------

5. Please provide your overall assessment of the quality of the Pheoton Chronometer relative to that of the Nigiren Timestar. Circle the number that best represents your judgment.

Lower Quality	1	2	3	4	5	6	7	Higher Quality
------------------	---	---	---	---	---	---	---	-------------------

6. Please provide your expected assessment of the overall performance of the Pheoton Chronometer relative to the Nigiren Timestar. Circle the number that best represents your judgment.

Worse	1	2	3	4	5	6	7	Better
Performance								Performance

7. Please provide your assessment of the exclusivity of the Pheoton Chronometer relative to the Nigiren Timestar. Circle the number that best represents your judgment.

Less Exclusive	1	2	3	4	5	6	7	More exclusive
-------------------	---	---	---	---	---	---	---	-------------------

8. Please provide your assessment of how prestigious the Pheoton Chronometer is relative to the Nigiren Timestar. Circle the number that best represents your judgment.

Less prestigious	1	2	3	4	5	6	7	More prestigious
---------------------	---	---	---	---	---	---	---	---------------------

9. Please provide your assessment of the extent to which the Pheoton Chronometer functions as a status symbol relative to the Nigiren Timestar. Circle the number that best represents your judgment.

Lesser Extent	1	2	3	4	5	6	7	Greater Extent
------------------	---	---	---	---	---	---	---	-------------------

PART C

Assume now that your budget permits you to purchase either the Pheoton Monarch or the Nigiren Royale for your brother. Keep in mind your assessment of your brother's needs, tastes and preferences as described earlier. Please review the task descriptions provided and then answer the questions below.

10. Please rate the desirability of the Pheoton Monarch relative to the Nigiren Royale. Circle the number that best represents your judgment.

Less	1	2	3	4	5	6	7	More
Desirable								Desirable

11. We would like you to divide 100 points between the Pheoton Monarch and the Nigiren Royale such that the division reflects the likelihood of your purchasing each watch. For example, if you are certain that you would buy the Pheoton Monarch and there is no chance of your buying the Nigiren Royale, your point allocation should be Pheoton Monarch = 100; Nigiren Royale = 0. If you are indifferent between the two watches, you should assign 50 points to each. Other divisions would reflect different likelihoods of purchase.

Pheoton Monarch	_____
Nigiren Royale	_____

12. Which one of the two watches would you choose for your brother ? Check only one of the two options.

Pheoton Monarch	_____
Nigiren Royale	_____

PART D

13. Please provide your overall assessment of the features of the Pheoton Monarch relative to the Nigiren Royale. Circle the number that best represents your judgment.

Worse Features	1	2	3	4	5	6	7	Better Features
----------------	---	---	---	---	---	---	---	-----------------

14. Please provide your overall assessment of the quality of the Pheoton Monarch relative to that of the Nigiren Royale. Circle the number that best represents your judgment.

Lower Quality	1	2	3	4	5	6	7	Higher Quality
---------------	---	---	---	---	---	---	---	----------------

15. Please provide your expected assessment of the overall performance of the Pheoton Monarch relative to the Nigiren Royale. Circle the number that best represents your judgment.

Worse	1	2	3	4	5	6	7	Better
Performance								Performance

16. Please provide your assessment of the exclusivity of the Pheoton Monarch relative to the Nigiren Royale. Circle the number that best represents your judgment.

Less Exclusive	1	2	3	4	5	6	7	More exclusive
-------------------	---	---	---	---	---	---	---	-------------------

17. Please provide your assessment of how prestigious the Pheoton Monarch is relative to the Nigiren Royale. Circle the number that best represents your judgment.

Less prestigious	1	2	3	4	5	6	7	More prestigious
---------------------	---	---	---	---	---	---	---	---------------------

18. Please provide your assessment of the extent to which the Pheoton Monarch functions as a status symbol relative to the Nigiren Royale. Circle the number that best represents your judgment.

Lesser Extent	1	2	3	4	5	6	7	Greater Extent
---------------	---	---	---	---	---	---	---	----------------



27. Your brother is liekly to show a gift watch off to his colleauges.

Strongly Disagree	1	2	3	4	5	6	7	Strongly Agree
-------------------	---	---	---	---	---	---	---	----------------

28. A gift watch will be inconspicuous among your brother's possessions.

Strongly Disagree	1	2	3	4	5	6	7	Strongly Agree
-------------------	---	---	---	---	---	---	---	----------------

29. Your brother is likely to talk about a gift watch with his colleagues.

Strongly Disagree	1	2	3	4	5	6	7	Strongly Agree
-------------------	---	---	---	---	---	---	---	----------------

30. A watch is likely to be used by your brother in solitary activities.

Strongly Disagree	1	2	3	4	5	6	7	Strongly Agree
-------------------	---	---	---	---	---	---	---	----------------

31. Your brother is more likely to use the gift watch in public versus private situations.

Strongly Disagree	1	2	3	4	5	6	7	Strongly Agree
-------------------	---	---	---	---	---	---	---	----------------

32. The gift watch is more likely to be valued for its objective versus image properties.

Strongly Disagree	1	2	3	4	5	6	7	Strongly Agree
-------------------	---	---	---	---	---	---	---	----------------

33. The descriptions of the four watches were quite realistic.

Strongly Disagree	1	2	3	4	5	6	7	Strongly Agree
-------------------	---	---	---	---	---	---	---	----------------

34. Buying a watch as a gift for your brother's 30th birthday is a realistic situation.

Strongly Disagree	1	2	3	4	5	6	7	Strongly Agree
-------------------	---	---	---	---	---	---	---	----------------

35. The choice task in the study scenario was quite interesting.

Strongly Disagree	1	2	3	4	5	6	7	Strongly Agree
-------------------	---	---	---	---	---	---	---	----------------

36. Your brother's preferences for a watch were described adequately in the task instructions.

Strongly Disagree	1	2	3	4	5	6	7	Strongly Agree
-------------------	---	---	---	---	---	---	---	----------------



PART F

We would like the following information for classification purposes only. Your identity will only be known to the researchers and will not be revealed in any report of this study.

23. Your age: \_\_\_\_\_ years
24. Gender:     Male   Female
25. Occupation: \_\_\_\_\_
26. If you are a student, please indicate:
- Major:                   \_\_\_\_\_
- Year:            \_\_\_\_\_Freshman/Sophomore  
                  \_\_\_\_\_Junior/Senior  
                  \_\_\_\_\_Graduate student

APPENDIX I  
QUESTIONNAIRE

PART A

After considering the wines described earlier, you realize that your budget will not permit you to spend over \$20 on the wine for your colleague. This makes it impossible for you to consider either the 1988 Chateau Adele Cabernet Sauvignon or the 1988 Cleos Estate Cabernet Sauvignon. Thus, you recognize that your decision is limited to the 1990 Chateau Adele Merlot and the 1990 Cleos Estate Merlot.

We would like you answer the following questions keeping in mind your assessment of your colleague's needs, tastes and preferences as described earlier. When answering the questions below, please feel free to go back to the previous sections and to review the task descriptions provided.

1. Please rate the desirability of the 1990 Chateau Adele Merlot relative to the 1990 Cleos Estate Merlot. Circle the number that best represents your judgment.

Less	1	2	3	4	5	6	7	More
Desirable								Desirable

2. We would like you to divide 100 points between the 1990 Chateau Adele Merlot and the 1990 Cleos Estate Merlot such that the division reflects the likelihood of your purchasing each wine. For example, if you are certain that you would buy the 1990 Chateau Adele Merlot and there is no chance of your buying the 1990 Cleos Estate Merlot, your point allocation should be 1990 Chateau Adele Merlot = 100; 1990 Cleos Estate Merlot = 0. If you are indifferent between the two wines, you should assign 50 points to each. Other divisions would reflect different likelihoods of purchase.

1990 Chateau Adele Merlot	
1990 Cleos Estate Merlot	

3. Which one of the two wines would you choose for your colleague ? Check only one of the two options.

1990 Chateau Adele Merlot	
1990 Cleos Estate Merlot	

Worse Features	1	2	3	4	5	6	7	Better Features
----------------	---	---	---	---	---	---	---	-----------------

Lower Quality	1	2	3	4	5	6	7	Higher Quality
---------------	---	---	---	---	---	---	---	----------------

Lower Satisfaction	1	2	3	4	5	6	7	Higher Satisfaction
--------------------	---	---	---	---	---	---	---	---------------------

Less Exclusive	1	2	3	4	5	6	7	More Exclusive
-------------------	---	---	---	---	---	---	---	-------------------

Less Prestigious	1	2	3	4	5	6	7	More Prestigious
------------------	---	---	---	---	---	---	---	------------------

Lesser Extent	1	2	3	4	5	6	7	Greater Extent
---------------	---	---	---	---	---	---	---	----------------

PART C

Assume now that your budget permits you to purchase either the 1988 Chateau Adele Cabernet Sauvignon or the 1988 Cleos Estate Cabernet Sauvignon for your colleague. Keep in mind your assessment of your colleague's needs, tastes and preferences as described earlier. When answering the questions below, please feel free to go back to previous sections and to review the task descriptions provided.

10. Please rate the desirability of the 1988 Chateau Adele Cabernet Sauvignon relative to the 1988 Cleos Estate Cabernet Sauvignon. Circle the number that best represents your judgment.

Less	1	2	3	4	5	6	7	More
Desirable								Desirable

11. We would like you to divide 100 points between the 1988 Chateau Adele Cabernet Sauvignon and the 1988 Cleos Estate Cabernet Sauvignon such that the division reflects the likelihood of your purchasing each wine. For example, if you are certain that you would buy the 1988 Chateau Adele Cabernet Sauvignon and there is no chance of your buying the 1988 Cleos Estate Cabernet Sauvignon, your point allocation should be 1988 Chateau Adele Cabernet Sauvignon = 100; 1988 Cleos Estate Cabernet Sauvignon = .0. If you are indifferent between the two wines, you should assign 50 points to each. Other divisions would reflect different likelihoods of purchase.

1988 Chateau Adele Cabernet Sauvignon	_____
1988 Cleos Estate Cabernet Sauvignon	_____

12. Which one of the two wines would you choose for your colleague ? Check only one of the two options.

1988 Chateau Adele Cabernet Sauvignon	_____
1988 Cleos Estate Cabernet Sauvignon	_____

Worse Features	1	2	3	4	5	6	7	Better Features
----------------	---	---	---	---	---	---	---	-----------------

Lower Quality	1	2	3	4	5	6	7	Higher Quality
------------------	---	---	---	---	---	---	---	-------------------

Lower Satisfaction	1	2	3	4	5	6	7	Higher Satisfaction
--------------------	---	---	---	---	---	---	---	---------------------

Less Exclusive	1	2	3	4	5	6	7	More Exclusive
-------------------	---	---	---	---	---	---	---	-------------------

Less Prestigious	1	2	3	4	5	6	7	More Prestigious
------------------	---	---	---	---	---	---	---	------------------

Lesser Extent	1	2	3	4	5	6	7	Greater Extent
------------------	---	---	---	---	---	---	---	-------------------

PART E

From this point on, please do not refer back to the task descriptions provided previously. Rather answer the questions as best as you can from memory or from your impressions so far. Please answer the following questions by circling the number that best represents your judgment.

19. How restricted is the availability of the 1988 Chateau Adele Cabernet Sauvignon relative to that of the 1988 Cleos Estate Cabernet Sauvignon ?

Less Restricted	1	2	3	4	5	6	7	More Restricted
-----------------	---	---	---	---	---	---	---	-----------------

20. How restricted is the availability of the 1990 Chateau Adele Merlot relative to that of the 1990 Cleos Estate Merlot ?

Less Restricted	1	2	3	4	5	6	7	More Restricted
--------------------	---	---	---	---	---	---	---	--------------------

21. How difficult is it to obtain the 1988 Chateau Adele Cabernet Sauvignon relative to the 1988 Cleos Estate Cabernet Sauvignon ?

Less Difficult	1	2	3	4	5	6	7	More Difficult
-------------------	---	---	---	---	---	---	---	-------------------

22. How difficult is it to obtain the 1990 Chateau Adele Merlot relative to the 1990 Cleos Estate Merlot ?

Less Difficult	1	2	3	4	5	6	7	More Difficult
-------------------	---	---	---	---	---	---	---	-------------------

Please indicate the level of your agreement or disagreement with the following statements by circling the appropriate number.

23. Your colleague is likely to value a wine for its compatibility with simple tasty dishes.

Strongly Disagree	1	2	3	4	5	6	7	Strongly Agree
-------------------	---	---	---	---	---	---	---	----------------

24. Your colleague is likely to value a wine for its compatibility with elaborate, exotic dishes.

Strongly Disagree	1	2	3	4	5	6	7	Strongly Agree
-------------------	---	---	---	---	---	---	---	----------------

25. Your colleague is likely to value a wine for its ability to project an image of refined taste.

Strongly Disagree	1	2	3	4	5	6	7	Strongly Agree
-------------------	---	---	---	---	---	---	---	----------------

26. Your colleague is likely to value a wine purely for its flavor and drinkability.

Strongly Disagree	1	2	3	4	5	6	7	Strongly Agree
-------------------	---	---	---	---	---	---	---	----------------



PART F

We would like the following information for classification purposes only. Your identity will only be known to the researchers and will not be revealed in any report of this study.

37. Your age: \_\_\_\_\_ years

38. Gender:     Male   Female

39. Occupation: \_\_\_\_\_

40. If you are a student, please indicate:

Major: \_\_\_\_\_

Year:       \_\_\_\_ Freshman/Sophomore  
             \_\_\_\_ Junior/Senior  
             \_\_\_\_ Graduate student



APPENDIX JBACKGROUND

As marketing researchers, we are very interested in developing research techniques that help us understand the market potential for new products. The purpose of this study is to test some market research techniques that will help determine consumer reactions to products before they are actually test marketed or launched.

These research techniques can result in better and quicker identification of consumer acceptance of new products and can save millions of dollars for companies that use them prior to new product development and introduction. This not only improves the company's profitability, but also lowers the prices that consumers pay for new products by eliminating wasteful expenditures on products that consumers do not like. For these reasons, it is important that you review and follow the study instructions carefully.

Because we do not want actual brand names to affect the study results, all the brand names used in the study are fictitious. However, the products described are based on real products and represent the types of choices that are actually available in the marketplace. Consequently, we would like you to imagine that you are the consumer in the product purchase situation described and respond accordingly.

Please carefully read the study instructions. After you have completed reading them, please turn to the enclosed questionnaire and answer the questions as indicated. There are no right or wrong answers and we are primarily interested in **how you feel you would respond** in that situation.

Thank you very much for your cooperation. Please turn the page and read the next set of task instructions.

TASK INSTRUCTIONS

Imagine that you are in the market for a luxury watch. This is a treat you have been wanting to give yourself for several years of hard work that have brought you professional success. You have an affinity for brand name quality products and are quite conscious of the status implications of your possessions.

Although you have a budget constraint, you know that you can comfortably afford the payments associated with a watch priced around \$1,400. You have done a careful search of watches in the \$1,000 to \$1,500 range and after careful consideration you have culled the options down to two watches - the PHEOTON MONARCH and the NIGIREN ROYALE. Each of these is a real watch, however, the brand names have been intentionally disguised for study purposes. Although the watches are somewhat different, they are the two that have the best "feel" to them. You are now at the point where you will choose between the two.

On the following pages, we describe the two watches. Please review this information carefully and try to form an impression of each watch on the basis of the information provided.

## APPENDIX K

### Group X:

This group consists of people with substantial wealth which is invested in both financial assets (stocks, bonds, other securities) as well as in real estate. Most of these people have inherited their money and their job is usually the management of their investments. Their consumption is characterized by the acquisition of the most luxurious products with an emphasis on expensive brand names.

### Group H:

This group consists primarily of successful professionals (e.g. medical doctors, lawyers, engineers, upper level managers, etc.) with several years of job experience. Typically, they are at the peak of their careers and their earning power. They are identified by very high levels of education (mostly master's degrees and Ph.Ds) and the expert knowledge associated with it. Not only are the group's incomes higher, but they can transfer their knowledge across professional settings.

### Group L1:

This group consists primarily of successful white collar office workers (accountants, bookkeepers, administrative assistants, paralegals, etc.) with several years of experience. Typically, they are at the peak of their careers and their earning power. They are identified by relatively high levels of education (mostly bachelor's degrees). Their education provides them with good knowledge in their respective fields and their years of professional experience have resulted in them developing a great deal of expertise.

### Group L2:

This group consists primarily of white collar office workers (accountants, bookkeepers, administrative assistants, paralegals, etc.) at the beginning of their careers. Typically, they are at the early stages of their careers and earning power. They are identified by relatively high levels of education (mostly bachelor's degrees). Their education provides them with good knowledge in their respective fields but due to their limited professional experience their expertise is not fully developed.

### Group L3:

This group consists primarily of successful blue collar technicians (electricians, maintenance personnel, carpenters, plumbers, etc.) with several years of job experience. Typically, they are at the peak of their careers and their earning power. They are identified by middle levels of education (mostly technical school). As a result of their education and training they have a good knowledge in their respective fields and their years of professional experience have resulted in them developing a great deal of expertise.

### Group L4:

This group consists primarily of blue collar technicians (electricians, maintenance personnel, carpenters, plumbers, etc.) at the beginning of their careers. Typically, they are at the early stages of their careers and their earning power. They are identified by middle levels of education (mostly technical school). Their education provides them with good knowledge in their respective fields, but due to their limited professional experience their expertise is not fully developed.

APPENDIX L1HL<sub>1</sub>THE PHEOTON MONARCH

The Pheoton Watch Company was established in Switzerland in 1832. The company has a long tradition of superbly designed and manufactured watches and is known for its unwavering commitment to quality and for its consistent pursuit of excellence. Pheoton owners provide loyal testimony to the performance and quality image of the watches.

The Pheoton Monarch represents the top of the Pheoton line and incorporates the latest technology in watch manufacturing. The company name and the exquisite design reflects quality and projects an image that fits the most formal occasions. The Monarch also offers the performance features that meet the exacting demands of most sports enthusiasts.

The Monarch has over 200 hand-assembled precision parts and is extraordinarily resistant to heat and corrosion. Its screwed down crown guarantees moisture protection and the watch is tested and certified to be waterproof and able to withstand pressures up to a depth of 600 feet. The fine mechanical movement features an 18 ruby construction and the watch offers a 40-hour power reserve.

The ultra thin design is so integrated that is impossible to tell where the case begins. The hardened mineral crystal is scratch-resistant and is surrounded by a unidirectional notched rotating bezel. The sculpted bracelet, made out of gold and platinum accentuates the classic elegance of the watch. The Pheoton Monarch indicates time, day, date and moonphase in its normal mode. In addition, it offers a state-of-the-art chronometric mode with multiple timing options accurate to one-hundredths of a second.

The Monarch has been an absolute hit with high level professionals. A buyer profile study showed that the product had gained significant national penetration into this social stratum. Monarch buyers are successful professionals (e.g. medical doctors, lawyers, engineers, upper level managers, etc.) with several years of job experience. Typically, they are at the peak of their careers and their earning power. They are identified by very high levels of education (mostly master's degrees and Ph.Ds) and the expert knowledge associated with it. Not only are the group's incomes higher, but they can transfer their knowledge across professional settings. According to a consumer report study, of every 100 Monarch owners, 95 fit a profile characterizing this group of successful professionals.

The other 5 fit a profile of established white collar workers. This group consists primarily of successful white collar office workers (accountants, bookkeepers, administrative assistants, paralegals, etc.) with several years of experience. Typically, they are at the peak of their careers and their earning power. They are identified by relatively high levels of education (mostly bachelor's degrees). Their education provides them with good knowledge in their respective fields and their years of professional experience have resulted in them developing a great deal of expertise. The Monarch retails for \$1299.95 at specialty watch dealers.

2HL,

#### THE PHEOTON MONARCH

The **Pheoton Watch Company** was established in Switzerland in 1832. The company has a long tradition of superbly designed and manufactured watches and is known for its unwavering commitment to quality and for its consistent pursuit of excellence. Pheoton owners provide loyal testimony to the performance and quality image of the watches.

The **Pheoton Monarch** represents the top of the Pheoton line and incorporates the latest technology in watch manufacturing. The company name and the exquisite design reflects quality and projects an image that fits the most formal occasions. The **Monarch** also offers the performance features that meet the exacting demands of most sports enthusiasts.

The **Monarch** has over 200 hand-assembled precision parts and is extraordinarily resistant to heat and corrosion. Its screwed down crown guarantees moisture protection and the watch is tested and certified to be waterproof and able to withstand pressures up to a depth of 600 feet. The fine mechanical movement features an 18 ruby construction and the watch offers a 40-hour power reserve.

The ultra thin design is so integrated that is impossible to tell where the case begins. The hardened mineral crystal is scratch-resistant and is surrounded by a unidirectional notched rotating bezel. The sculpted bracelet, made out of gold and platinum accentuates the classic elegance of the watch. The **Pheoton Monarch** indicates time, day, date and moonphase in its normal mode. In addition, it offers a state-of-the-art chronometric mode with multiple timing options accurate to one-hundredths of a second.

The **Monarch** has been popular with high level professionals. A buyer profile study showed that the product had gained significant national penetration into this social stratum. **Monarch** buyers are successful professionals (e.g. medical doctors, lawyers, engineers, upper level managers, etc.) with several years of job experience. Typically, they are at the peak of their careers and their earning power. They are identified by very high levels of education (mostly master's degrees and Ph.Ds) and the expert knowledge associated with it. Not only are the group's incomes higher, but they can transfer their knowledge across professional settings. According to a consumer report study, of every 100 **Monarch** owners, 50 fit a profile characterizing this group of successful professionals.

The other 50 fit a profile of established white collar workers. This group consists primarily of successful white collar office workers (accountants, bookkeepers, administrative assistants, paralegals, etc.) with several years of experience. Typically, they are at the peak of their careers and their earning power. They are identified by relatively high levels of education (mostly bachelor's degrees). Their education provides them with good knowledge in their respective fields and their years of professional experience have resulted in them developing a great deal of expertise. The **Monarch** retails for \$1299.95 at specialty watch dealers.

1HL<sub>2</sub>THE PHEOTON MONARCH

The **Pheoton Watch Company** was established in Switzerland in 1832. The company has a long tradition of superbly designed and manufactured watches and is known for its unwavering commitment to quality and for its consistent pursuit of excellence. Pheoton owners provide loyal testimony to the performance and quality image of the watches.

The **Pheoton Monarch** represents the top of the Pheoton line and incorporates the latest technology in watch manufacturing. The company name and the exquisite design reflects quality and projects an image that fits the most formal occasions. The **Monarch** also offers the performance features that meet the exacting demands of most sports enthusiasts.

The **Monarch** has over 200 hand-assembled precision parts and is extraordinarily resistant to heat and corrosion. Its screwed down crown guarantees moisture protection and the watch is tested and certified to be waterproof and able to withstand pressures up to a depth of 600 feet. The fine mechanical movement features an 18 ruby construction and the watch offers a 40-hour power reserve.

The ultra thin design is so integrated that is impossible to tell where the case begins. The hardened mineral crystal is scratch-resistant and is surrounded by a unidirectional notched rotating bezel. The sculpted bracelet, made out of gold and platinum accentuates the classic elegance of the watch. The **Pheoton Monarch** indicates time, day, date and moonphase in its normal mode. In addition, it offers a state-of-the-art chronometric mode with multiple timing options accurate to one-hundredths of a second.

The **Monarch** has been an absolute hit with high level professionals. A buyer profile study showed that the product had gained significant national penetration into this social stratum. **Monarch** buyers are successful professionals (e.g. medical doctors, lawyers, engineers, upper level managers, etc.) with several years of job experience. Typically, they are at the peak of their careers and their earning power. They are identified by very high levels of education (mostly master's degrees and Ph.Ds) and the expert knowledge associated with it. Not only are the group's incomes higher, but they can transfer their knowledge across professional settings. According to a consumer report study, of every 100 **Monarch** owners, 95 fit a profile characterizing this group of successful professionals.

The other 5 fit a profile of novice white collar workers. This group consists primarily of white collar office workers (accountants, bookkeepers, administrative assistants, paralegals, etc.) at the beginning of their careers. Typically, they are at the early stages of their careers and their earning power. They are identified by relatively high levels of education (mostly bachelor's degrees). Their education provides them with good knowledge in their respective fields but due to their limited professional experience their expertise is not fully developed. The **Monarch** retails for \$1299.95 at specialty watch dealers.

2HL<sub>2</sub>THE PHEOTON MONARCH

The **Pheoton Watch Company** was established in Switzerland in 1832. The company has a long tradition of superbly designed and manufactured watches and is known for its unwavering commitment to quality and for its consistent pursuit of excellence. Pheoton owners provide loyal testimony to the performance and quality image of the watches.

The **Pheoton Monarch** represents the top of the Pheoton line and incorporates the latest technology in watch manufacturing. The company name and the exquisite design reflects quality and projects an image that fits the most formal occasions. The **Monarch** also offers the performance features that meet the exacting demands of most sports enthusiasts.

The **Monarch** has over 200 hand-assembled precision parts and is extraordinarily resistant to heat and corrosion. Its screwed down crown guarantees moisture protection and the watch is tested and certified to be waterproof and able to withstand pressures up to a depth of 600 feet. The fine mechanical movement features an 18 ruby construction and the watch offers a 40-hour power reserve.

The ultra thin design is so integrated that is impossible to tell where the case begins. The hardened mineral crystal is scratch-resistant and is surrounded by a unidirectional notched rotating bezel. The sculpted bracelet, made out of gold and platinum accentuates the classic elegance of the watch. The **Pheoton Monarch** indicates time, day, date and moonphase in its normal mode. In addition, it offers a state-of-the-art chronometric mode with multiple timing options accurate to one-hundredths of a second.

The **Monarch** has been popular with high level professionals. A buyer profile study showed that the product had gained significant national penetration into this social stratum. **Monarch** buyers are successful professionals (e.g. medical doctors, lawyers, engineers, upper level managers, etc.) with several years of job experience. Typically, they are at the peak of their careers and their earning power. They are identified by very high levels of education (mostly master's degrees and Ph.Ds) and the expert knowledge associated with it. Not only are the group's incomes higher, but they can transfer their knowledge across professional settings. According to a consumer report study, of every 100 **Monarch** owners, 50 fit a profile characterizing this group of successful professionals.

The other 50 fit a profile of novice white collar workers. This group consists primarily of white collar office workers (accountants, bookkeepers, administrative assistants, paralegals, etc.) at the beginning of their careers. Typically, they are at the early stages of their careers and their earning power. They are identified by relatively high levels of education (mostly bachelor's degrees). Their education provides them with good knowledge in their respective fields but due to their limited professional experience their expertise is not fully developed. The **Monarch** retails for \$1299.95 at specialty watch dealers.

1HL,

#### THE PHEOTON MONARCH

The **Pheoton Watch Company** was established in Switzerland in 1832. The company has a long tradition of superbly designed and manufactured watches and is known for its unwavering commitment to quality and for its consistent pursuit of excellence. Pheoton owners provide loyal testimony to the performance and quality image of the watches.

The **Pheoton Monarch** represents the top of the Pheoton line and incorporates the latest technology in watch manufacturing. The company name and the exquisite design reflects quality and projects an image that fits the most formal occasions. The **Monarch** also offers the performance features that meet the exacting demands of most sports enthusiasts.

The **Monarch** has over 200 hand-assembled precision parts and is extraordinarily resistant to heat and corrosion. Its screwed down crown guarantees moisture protection and the watch is tested and certified to be waterproof and able to withstand pressures up to a depth of 600 feet. The fine mechanical movement features an 18 ruby construction and the watch offers a 40-hour power reserve.

The ultra thin design is so integrated that is impossible to tell where the case begins. The hardened mineral crystal is scratch-resistant and is surrounded by a unidirectional notched rotating bezel. The sculpted bracelet, made out of gold and platinum accentuates the classic elegance of the watch. The **Pheoton Monarch** indicates time, day, date and moonphase in its normal mode. In addition, it offers a state-of-the-art chronometric mode with multiple timing options accurate to one-hundredths of a second.

The **Monarch** has been an absolute hit with high level professionals. A buyer profile study showed that the product had gained significant national penetration into this social stratum. **Monarch** buyers are successful professionals (e.g. medical doctors, lawyers, engineers, upper level managers, etc.) with several years of job experience. Typically, they are at the peak of their careers and their earning power. They are identified by very high levels of education (mostly master's degrees and Ph.Ds) and the expert knowledge associated with it. Not only are the group's incomes higher, but they can transfer their knowledge across professional settings. According to a consumer report study, of every 100 **Monarch** owners, 95 fit a profile characterizing this group of successful professionals.

The other 5 fit a profile of established blue collar workers and technicians. This group consists primarily of blue collar technicians (electricians, maintenance personnel, carpenters, plumbers, etc.) with several years of job experience. Typically, they are at the peak of their careers and their earning power. They are identified by middle levels of education (mostly technical school). As a result of their education and training they have a good knowledge in their respective fields and their years of professional experience have resulted in them developing a great deal of expertise. The **Monarch** retails for \$1299.95 at specialty watch dealers.



2HL,

#### THE PHEOTON MONARCH

The **Pheoton Watch Company** was established in Switzerland in 1832. The company has a long tradition of superbly designed and manufactured watches and is known for its unwavering commitment to quality and for its consistent pursuit of excellence. Pheoton owners provide loyal testimony to the performance and quality image of the watches.

The **Pheoton Monarch** represents the top of the Pheoton line and incorporates the latest technology in watch manufacturing. The company name and the exquisite design reflects quality and projects an image that fits the most formal occasions. The **Monarch** also offers the performance features that meet the exacting demands of most sports enthusiasts.

The **Monarch** has over 200 hand-assembled precision parts and is extraordinarily resistant to heat and corrosion. Its screwed down crown guarantees moisture protection and the watch is tested and certified to be waterproof and able to withstand pressures up to a depth of 600 feet. The fine mechanical movement features an 18 ruby construction and the watch offers a 40-hour power reserve.

The ultra thin design is so integrated that is impossible to tell where the case begins. The hardened mineral crystal is scratch-resistant and is surrounded by a unidirectional notched rotating bezel. The sculpted bracelet, made out of gold and platinum accentuates the classic elegance of the watch. The **Pheoton Monarch** indicates time, day, date and moonphase in its normal mode. In addition, it offers a state-of-the-art chronometric mode with multiple timing options accurate to one-hundredths of a second.

The **Monarch** has been popular with high level professionals. A buyer profile study showed that the product had gained significant national penetration into this social stratum. **Monarch** buyers are successful professionals (e.g. medical doctors, lawyers, engineers, upper level managers, etc.) with several years of job experience. Typically, they are at the peak of their careers and their earning power. They are identified by very high levels of education (mostly master's degrees and Ph.Ds) and the expert knowledge associated with it. Not only are the group's incomes higher, but they can transfer their knowledge across professional settings. According to a consumer report study, of every 100 **Monarch** owners, 50 fit a profile characterizing this group of successful professionals.

The other 50 fit a profile of established blue collar workers and technicians. This group consists primarily of blue collar technicians (electricians, maintenance personnel, carpenters, plumbers, etc.) with several years of job experience. Typically, they are at the peak of their careers and their earning power. They are identified by middle levels of education (mostly technical school). As a result of their education and training they have a good knowledge in their respective fields and their years of professional experience have resulted in them developing a great deal of expertise. The **Monarch** retails for \$1299.95 at specialty watch dealers.

1HL<sub>4</sub>THE PHEOTON MONARCH

The **Pheoton Watch Company** was established in Switzerland in 1832. The company has a long tradition of superbly designed and manufactured watches and is known for its unwavering commitment to quality and for its consistent pursuit of excellence. Pheoton owners provide loyal testimony to the performance and quality image of the watches.

The **Pheoton Monarch** represents the top of the Pheoton line and incorporates the latest technology in watch manufacturing. The company name and the exquisite design reflects quality and projects an image that fits the most formal occasions. The **Monarch** also offers the performance features that meet the exacting demands of most sports enthusiasts.

The **Monarch** has over 200 hand-assembled precision parts and is extraordinarily resistant to heat and corrosion. Its screwed down crown guarantees moisture protection and the watch is tested and certified to be waterproof and able to withstand pressures up to a depth of 600 feet. The fine mechanical movement features an 18 ruby construction and the watch offers a 40-hour power reserve.

The ultra thin design is so integrated that is impossible to tell where the case begins. The hardened mineral crystal is scratch-resistant and is surrounded by a unidirectional notched rotating bezel. The sculpted bracelet, made out of gold and platinum accentuates the classic elegance of the watch. The **Pheoton Monarch** indicates time, day, date and moonphase in its normal mode. In addition, it offers a state-of-the-art chronometric mode with multiple timing options accurate to one-hundredths of a second.

The **Monarch** has been an absolute hit with high level professionals. A buyer profile study showed that the product had gained significant national penetration into this social stratum. **Monarch** buyers are successful professionals (e.g. medical doctors, lawyers, engineers, upper level managers, etc.) with several years of job experience. Typically, they are at the peak of their careers and their earning power. They are identified by very high levels of education (mostly master's degrees and Ph.Ds) and the expert knowledge associated with it. Not only are the group's incomes higher, but they can transfer their knowledge across professional settings. According to a consumer report study, of every 100 **Monarch** owners, 95 fit a profile characterizing this group of successful professionals.

The other 5 fit a profile of novice blue collar workers and technicians. This group consists primarily of blue collar technicians (electricians, maintenance personnel, carpenters, plumbers, etc.) at the beginning of their careers. Typically, they are at the early stages of their careers and their earning power. They are identified by middle levels of education (mostly technical school). Their education provides them with good knowledge in their respective fields but due to their limited professional experience their expertise is not fully developed. The **Monarch** retails for \$1299.95 at specialty watch dealers.

2HL<sub>4</sub>THE PHEOTON MONARCH

The **Pheoton Watch Company** was established in Switzerland in 1832. The company has a long tradition of superbly designed and manufactured watches and is known for its unwavering commitment to quality and for its consistent pursuit of excellence. Pheoton owners provide loyal testimony to the performance and quality image of the watches.

The **Pheoton Monarch** represents the top of the Pheoton line and incorporates the latest technology in watch manufacturing. The company name and the exquisite design reflects quality and projects an image that fits the most formal occasions. The **Monarch** also offers the performance features that meet the exacting demands of most sports enthusiasts.

The **Monarch** has over 200 hand-assembled precision parts and is extraordinarily resistant to heat and corrosion. Its screwed down crown guarantees moisture protection and the watch is tested and certified to be waterproof and able to withstand pressures up to a depth of 600 feet. The fine mechanical movement features an 18 ruby construction and the watch offers a 40-hour power reserve.

The ultra thin design is so integrated that is impossible to tell where the case begins. The hardened mineral crystal is scratch-resistant and is surrounded by a unidirectional notched rotating bezel. The sculpted bracelet, made out of gold and platinum accentuates the classic elegance of the watch. The **Pheoton Monarch** indicates time, day, date and moonphase in its normal mode. In addition, it offers a state-of-the-art chronometric mode with multiple timing options accurate to one-hundredths of a second.

The **Monarch** has been popular with high level professionals. A buyer profile study showed that the product had gained significant national penetration into this social stratum. **Monarch** buyers are successful professionals (e.g. medical doctors, lawyers, engineers, upper level managers, etc.) with several years of job experience. Typically, they are at the peak of their careers and their earning power. They are identified by very high levels of education (mostly master's degrees and Ph.Ds) and the expert knowledge associated with it. Not only are the group's incomes higher, but they can transfer their knowledge across professional settings. According to a consumer report study, of every 100 **Monarch** owners, 50 fit a profile characterizing this group of successful professionals.

The other 50 fit a profile of novice blue collar workers and technicians. This group consists primarily of blue collar technicians (electricians, maintenance personnel, carpenters, plumbers, etc.) at the beginning of their careers. Typically, they are at the early stages of their careers and their earning power. They are identified by middle levels of education (mostly technical school). Their education provides them with good knowledge in their respective fields but due to their limited professional experience their expertise is not fully developed. The **Monarch** retails for \$1299.95 at specialty watch dealers.

1L,X

THE PHEOTON MONARCH

The **Pheoton Watch Company** was established in Switzerland in 1832. The company has a long tradition of superbly designed and manufactured watches and is known for its unwavering commitment to quality and for its consistent pursuit of excellence. Pheoton owners provide loyal testimony to the performance and quality image of the watches.

The **Pheoton Monarch** represents the top of the Pheoton line and incorporates the latest technology in watch manufacturing. The company name and the exquisite design reflects quality and projects an image that fits the most formal occasions. The **Monarch** also offers the performance features that meet the exacting demands of most sports enthusiasts.

The **Monarch** has over 200 hand-assembled precision parts and is extraordinarily resistant to heat and corrosion. Its screwed down crown guarantees moisture protection and the watch is tested and certified to be waterproof and able to withstand pressures up to a depth of 600 feet. The fine mechanical movement features an 18 ruby construction and the watch offers a 40-hour power reserve.

The ultra thin design is so integrated that is impossible to tell where the case begins. The hardened mineral crystal is scratch-resistant and is surrounded by a unidirectional notched rotating bezel. The sculpted bracelet, made out of gold and platinum accentuates the classic elegance of the watch. The **Pheoton Monarch** indicates time, day, date and moonphase in its normal mode. In addition, it offers a state-of-the-art chronometric mode with multiple timing options accurate to one-hundredths of a second.

The **Monarch** has been an absolute hit with established blue collar workers and technicians. A buyer profile study showed that the product had gained significant national penetration into this social stratum. **Monarch** buyers are successful blue collar technicians (electricians, maintenance personnel, carpenters, plumbers, etc.) with several years of job experience. Typically, they are at the peak of their careers and their earning power. They are identified by middle levels of education (mostly technical school). As a result of their education and training they have a good knowledge in their respective fields and their years of professional experience have resulted in them developing a great deal of expertise. According to a consumer report study, of every 100 **Monarch** owners, 95 fit a profile characterizing this group of successful blue collar workers and technicians.

The other 5 fit a profile of independently wealthy individuals. This group consists of people with substantial wealth which is invested in both financial assets (stocks, bonds, other securities) as well as in real estate. Most of these people have inherited their money and their job is usually the management of their investments. Their consumption is characterized by the acquisition of the most luxurious products with an emphasis on expensive brand names. The **Monarch** retails for \$1299.95 at specialty watch dealers.

2L,X

THE PHEOTON MONARCH

The **Pheoton Watch Company** was established in Switzerland in 1832. The company has a long tradition of superbly designed and manufactured watches and is known for its unwavering commitment to quality and for its consistent pursuit of excellence. Pheoton owners provide loyal testimony to the performance and quality image of the watches.

The **Pheoton Monarch** represents the top of the Pheoton line and incorporates the latest technology in watch manufacturing. The company name and the exquisite design reflects quality and projects an image that fits the most formal occasions. The **Monarch** also offers the performance features that meet the exacting demands of most sports enthusiasts.

The **Monarch** has over 200 hand-assembled precision parts and is extraordinarily resistant to heat and corrosion. Its screwed down crown guarantees moisture protection and the watch is tested and certified to be waterproof and able to withstand pressures up to a depth of 600 feet. The fine mechanical movement features an 18 ruby construction and the watch offers a 40-hour power reserve.

The ultra thin design is so integrated that is impossible to tell where the case begins. The hardened mineral crystal is scratch-resistant and is surrounded by a unidirectional notched rotating bezel. The sculpted bracelet, made out of gold and platinum accentuates the classic elegance of the watch. The **Pheoton Monarch** indicates time, day, date and moonphase in its normal mode. In addition, it offers a state-of-the-art chronometric mode with multiple timing options accurate to one-hundredths of a second.

The **Monarch** has been popular with established blue collar workers and technicians. A buyer profile study showed that the product had gained significant national penetration into this social stratum. **Monarch** buyers are successful blue collar technicians (electricians, maintenance personnel, carpenters, plumbers, etc.) with several years of job experience. Typically, they are at the peak of their careers and their earning power. They are identified by middle levels of education (mostly technical school). As a result of their education and training they have a good knowledge in their respective fields and their years of professional experience have resulted in them developing a great deal of expertise. According to a consumer report study, of every 100 **Monarch** owners, 50 fit a profile characterizing this group of successful blue collar workers and technicians.

The other 50 fit a profile of independently wealthy individuals. This group consists of people with substantial wealth which is invested in both financial assets (stocks, bonds, other securities) as well as in real estate. Most of these people have inherited their money and their job is usually the management of their investments. Their consumption is characterized by the acquisition of the most luxurious products with an emphasis on expensive brand names. The **Monarch** retails for \$1299.95 at specialty watch dealers.

1L<sub>3</sub>L<sub>2</sub>THE PHEOTON MONARCH

The **Pheoton Watch Company** was established in Switzerland in 1832. The company has a long tradition of superbly designed and manufactured watches and is known for its unwavering commitment to quality and for its consistent pursuit of excellence. Pheoton owners provide loyal testimony to the performance and quality image of the watches.

The **Pheoton Monarch** represents the top of the Pheoton line and incorporates the latest technology in watch manufacturing. The company name and the exquisite design reflects quality and projects an image that fits the most formal occasions. The **Monarch** also offers the performance features that meet the exacting demands of most sports enthusiasts.

The **Monarch** has over 200 hand-assembled precision parts and is extraordinarily resistant to heat and corrosion. Its screwed down crown guarantees moisture protection and the watch is tested and certified to be waterproof and able to withstand pressures up to a depth of 600 feet. The fine mechanical movement features an 18 ruby construction and the watch offers a 40-hour power reserve.

The ultra thin design is so integrated that is impossible to tell where the case begins. The hardened mineral crystal is scratch-resistant and is surrounded by a unidirectional notched rotating bezel. The sculpted bracelet, made out of gold and platinum accentuates the classic elegance of the watch. The **Pheoton Monarch** indicates time, day, date and moonphase in its normal mode. In addition, it offers a state-of-the-art chronometric mode with multiple timing options accurate to one-hundredths of a second.

The **Monarch** has been an absolute hit with established blue collar workers and technicians. A buyer profile study showed that the product had gained significant national penetration into this social stratum. **Monarch** buyers are successful blue collar technicians (electricians, maintenance personnel, carpenters, plumbers, etc.) with several years of job experience. Typically, they are at the peak of their careers and their earning power. They are identified by middle levels of education (mostly technical school). As a result of their education and training they have a good knowledge in their respective fields and their years of professional experience have resulted in them developing a great deal of expertise. According to a consumer report study, of every 100 **Monarch** owners, 95 fit a profile characterizing this group of successful blue collar workers and technicians.

The other 5 fit a profile of novice white collar workers. This group consists primarily of white collar office workers (accountants, bookkeepers, administrative assistants, paralegals, etc.) at the beginning of their careers. Typically, they are at the early stages of their careers and their earning power. They are identified by relatively high levels of education (mostly bachelor's degrees). Their education provides them with good knowledge in their respective fields but due to their limited professional experience their expertise is not fully developed. The **Monarch** retails for \$1299.95 at specialty watch dealers.

2L<sub>1</sub>L<sub>2</sub>THE PHEOTON MONARCH

The **Pheoton Watch Company** was established in Switzerland in 1832. The company has a long tradition of superbly designed and manufactured watches and is known for its unwavering commitment to quality and for its consistent pursuit of excellence. Pheoton owners provide loyal testimony to the performance and quality image of the watches.

The **Pheoton Monarch** represents the top of the Pheoton line and incorporates the latest technology in watch manufacturing. The company name and the exquisite design reflects quality and projects an image that fits the most formal occasions. The **Monarch** also offers the performance features that meet the exacting demands of most sports enthusiasts.

The **Monarch** has over 200 hand-assembled precision parts and is extraordinarily resistant to heat and corrosion. Its screwed down crown guarantees moisture protection and the watch is tested and certified to be waterproof and able to withstand pressures up to a depth of 600 feet. The fine mechanical movement features an 18 ruby construction and the watch offers a 40-hour power reserve.

The ultra thin design is so integrated that is impossible to tell where the case begins. The hardened mineral crystal is scratch-resistant and is surrounded by a unidirectional notched rotating bezel. The sculpted bracelet, made out of gold and platinum accentuates the classic elegance of the watch. The **Pheoton Monarch** indicates time, day, date and moonphase in its normal mode. In addition, it offers a state-of-the-art chronometric mode with multiple timing options accurate to one-hundredths of a second.

The **Monarch** has been popular with established blue collar workers and technicians. A buyer profile study showed that the product had gained significant national penetration into this social stratum. **Monarch** buyers are successful blue collar technicians (electricians, maintenance personnel, carpenters, plumbers, etc.) with several years of job experience. Typically, they are at the peak of their careers and their earning power. They are identified by middle levels of education (mostly technical school). As a result of their education and training they have a good knowledge in their respective fields and their years of professional experience have resulted in them developing a great deal of expertise. According to a consumer report study, of every 100 **Monarch** owners, 50 fit a profile characterizing this group of successful blue collar workers and technicians.

The other 50 fit a profile of novice white collar workers. This group consists primarily of white collar office workers (accountants, bookkeepers, administrative assistants, paralegals, etc.) at the beginning of their careers. Typically, they are at the early stages of their careers and their earning power. They are identified by relatively high levels of education (mostly bachelor's degrees). Their education provides them with good knowledge in their respective fields but due to their limited professional experience their expertise is not fully developed. The **Monarch** retails for \$1299.95 at specialty watch dealers.

1L<sub>2</sub>L<sub>1</sub>

### THE PHEOTON MONARCH

The Pheoton Watch Company was established in Switzerland in 1832. The company has a long tradition of superbly designed and manufactured watches and is known for its unwavering commitment to quality and for its consistent pursuit of excellence. Pheoton owners provide loyal testimony to the performance and quality image of the watches.

The Pheoton Monarch represents the top of the Pheoton line and incorporates the latest technology in watch manufacturing. The company name and the exquisite design reflects quality and projects an image that fits the most formal occasions. The Monarch also offers the performance features that meet the exacting demands of most sports enthusiasts.

The Monarch has over 200 hand-assembled precision parts and is extraordinarily resistant to heat and corrosion. Its screwed down crown guarantees moisture protection and the watch is tested and certified to be waterproof and able to withstand pressures up to a depth of 600 feet. The fine mechanical movement features an 18 ruby construction and the watch offers a 40-hour power reserve.

The ultra thin design is so integrated that is impossible to tell where the case begins. The hardened mineral crystal is scratch-resistant and is surrounded by a unidirectional notched rotating bezel. The sculpted bracelet, made out of gold and platinum accentuates the classic elegance of the watch. The Pheoton Monarch indicates time, day, date and moonphase in its normal mode. In addition, it offers a state-of-the-art chronometric mode with multiple timing options accurate to one-hundredths of a second.

The Monarch has been an absolute hit with established blue collar workers and technicians. A buyer profile study showed that the product had gained significant national penetration into this social stratum. Monarch buyers are successful blue collar technicians (electricians, maintenance personnel, carpenters, plumbers, etc.) with several years of job experience. Typically, they are at the peak of their careers and their earning power. They are identified by middle levels of education (mostly technical school). As a result of their education and training they have a good knowledge in their respective fields and their years of professional experience have resulted in them developing a great deal of expertise. According to a consumer report study, of every 100 Monarch owners, 95 fit a profile characterizing this group of successful blue collar workers and technicians.

The other 5 fit a profile of established white collar workers. This group consists primarily of successful white collar office workers (accountants, bookkeepers, administrative assistants, paralegals, etc.) with several years of experience. Typically, they are at the peak of their careers and their earning power. They are identified by relatively high levels of education (mostly bachelor's degrees). Their education provides them with good knowledge in their respective fields and their years of professional experience have resulted in them developing a great deal of expertise. The Monarch retails for \$1299.95 at specialty watch dealers.



2L<sub>3</sub>L<sub>1</sub>

#### THE PHEOTON MONARCH

The Pheoton Watch Company was established in Switzerland in 1832. The company has a long tradition of superbly designed and manufactured watches and is known for its unwavering commitment to quality and for its consistent pursuit of excellence. Pheoton owners provide loyal testimony to the performance and quality image of the watches.

The Pheoton Monarch represents the top of the Pheoton line and incorporates the latest technology in watch manufacturing. The company name and the exquisite design reflects quality and projects an image that fits the most formal occasions. The Monarch also offers the performance features that meet the exacting demands of most sports enthusiasts.

The Monarch has over 200 hand-assembled precision parts and is extraordinarily resistant to heat and corrosion. Its screwed down crown guarantees moisture protection and the watch is tested and certified to be waterproof and able to withstand pressures up to a depth of 600 feet. The fine mechanical movement features an 18 ruby construction and the watch offers a 40-hour power reserve.

The ultra thin design is so integrated that is impossible to tell where the case begins. The hardened mineral crystal is scratch-resistant and is surrounded by a unidirectional notched rotating bezel. The sculpted bracelet, made out of gold and platinum accentuates the classic elegance of the watch. The Pheoton Monarch indicates time, day, date and moonphase in its normal mode. In addition, it offers a state-of-the-art chronometric mode with multiple timing options accurate to one-hundredths of a second.

The Monarch has been popular with established blue collar workers and technicians. A buyer profile study showed that the product had gained significant national penetration into this social stratum. Monarch buyers are successful blue collar technicians (electricians, maintenance personnel, carpenters, plumbers, etc.) with several years of job experience. Typically, they are at the peak of their careers and their earning power. They are identified by middle levels of education (mostly technical school). As a result of their education and training they have a good knowledge in their respective fields and their years of professional experience have resulted in them developing a great deal of expertise. According to a consumer report study, of every 100 Monarch owners, 50 fit a profile characterizing this group of successful blue collar workers and technicians.

The other 50 fit a profile of established white collar workers. This group consists primarily of successful white collar office workers (accountants, bookkeepers, administrative assistants, paralegals, etc.) with several years of experience. Typically, they are at the peak of their careers and their earning power. They are identified by relatively high levels of education (mostly bachelor's degrees). Their education provides them with good knowledge in their respective fields and their years of professional experience have resulted in them developing a great deal of expertise. The Monarch retails for \$1299.95 at specialty watch dealers.

1L,H

THE PHEOTON MONARCH

The **Pheoton Watch Company** was established in Switzerland in 1832. The company has a long tradition of superbly designed and manufactured watches and is known for its unwavering commitment to quality and for its consistent pursuit of excellence. Pheoton owners provide loyal testimony to the performance and quality image of the watches.

The **Pheoton Monarch** represents the top of the Pheoton line and incorporates the latest technology in watch manufacturing. The company name and the exquisite design reflects quality and projects an image that fits the most formal occasions. The **Monarch** also offers the performance features that meet the exacting demands of most sports enthusiasts.

The **Monarch** has over 200 hand-assembled precision parts and is extraordinarily resistant to heat and corrosion. Its screwed down crown guarantees moisture protection and the watch is tested and certified to be waterproof and able to withstand pressures up to a depth of 600 feet. The fine mechanical movement features an 18 ruby construction and the watch offers a 40-hour power reserve.

The ultra thin design is so integrated that is impossible to tell where the case begins. The hardened mineral crystal is scratch-resistant and is surrounded by a unidirectional notched rotating bezel. The sculpted bracelet, made out of gold and platinum accentuates the classic elegance of the watch. The **Pheoton Monarch** indicates time, day, date and moonphase in its normal mode. In addition, it offers a state-of-the-art chronometric mode with multiple timing options accurate to one-hundredths of a second.

The **Monarch** has been an absolute hit with established blue collar workers and technicians. A buyer profile study showed that the product had gained significant national penetration into this social stratum. **Monarch** buyers are successful blue collar technicians (electricians, maintenance personnel, carpenters, plumbers, etc.) with several years of job experience. Typically, they are at the peak of their careers and their earning power. They are identified by middle levels of education (mostly technical school). As a result of their education and training they have a good knowledge in their respective fields and their years of professional experience have resulted in them developing a great deal of expertise. According to a consumer report study, of every 100 **Monarch** owners, 95 fit a profile characterizing this group of successful blue collar workers and technicians.

The other 5 fit a profile of high level professionals. This group consists primarily of successful professionals (e.g. medical doctors, lawyers, engineers, upper level managers, etc.) with several years of job experience. Typically, they are at the peak of their careers and their earning power. They are identified by very high levels of education (mostly master's degrees and Ph.Ds) and the expert knowledge associated with it. Not only are the group's incomes higher, but they can transfer their knowledge across professional settings. The **Monarch** retails for \$1299.95 at specialty watch dealers.

2L<sub>3</sub>HTHE PHEOTON MONARCH

The **Pheoton Watch Company** was established in Switzerland in 1832. The company has a long tradition of superbly designed and manufactured watches and is known for its unwavering commitment to quality and for its consistent pursuit of excellence. Pheoton owners provide loyal testimony to the performance and quality image of the watches.

The **Pheoton Monarch** represents the top of the Pheoton line and incorporates the latest technology in watch manufacturing. The company name and the exquisite design reflects quality and projects an image that fits the most formal occasions. The **Monarch** also offers the performance features that meet the exacting demands of most sports enthusiasts.

The **Monarch** has over 200 hand-assembled precision parts and is extraordinarily resistant to heat and corrosion. Its screwed down crown guarantees moisture protection and the watch is tested and certified to be waterproof and able to withstand pressures up to a depth of 600 feet. The fine mechanical movement features an 18 ruby construction and the watch offers a 40-hour power reserve.

The ultra thin design is so integrated that is impossible to tell where the case begins. The hardened mineral crystal is scratch-resistant and is surrounded by a unidirectional notched rotating bezel. The sculpted bracelet, made out of gold and platinum accentuates the classic elegance of the watch. The **Pheoton Monarch** indicates time, day, date and moonphase in its normal mode. In addition, it offers a state-of-the-art chronometric mode with multiple timing options accurate to one-hundredths of a second.

The **Monarch** has been an popular with established blue collar workers and technicians. A buyer profile study showed that the product had gained significant national penetration into this social stratum. **Monarch** buyers are successful blue collar technicians (electricians, maintenance personnel, carpenters, plumbers, etc.) with several years of job experience. Typically, they are at the peak of their careers and their earning power. They are identified by middle levels of education (mostly technical school). As a result of their education and training they have a good knowledge in their respective fields and their years of professional experience have resulted in them developing a great deal of expertise. According to a consumer report study, of every 100 **Monarch** owners, 50 fit a profile characterizing this group of successful blue collar workers and technicians.

The other 50 fit a profile of high level professionals. This group consists primarily of successful professionals (e.g. medical doctors, lawyers, engineers, upper level managers, etc.) with several years of job experience. Typically, they are at the peak of their careers and their earning power. They are identified by very high levels of education (mostly master's degrees and Ph.Ds) and the expert knowledge associated with it. Not only are the group's incomes higher, but they can transfer their knowledge across professional settings. The **Monarch** retails for \$1299.95 at specialty watch dealers.

### THE NIGIREN ROYALE

**Nigiren GmbH** is a 150-year old Swiss watchmaker. The company is family-owned and operated and its watches convey its tradition of quality and excellence in manufacturing and design. Nigiren owners proudly point to the handsome designs and quality image of their watches and testify to their remarkable performance and durability.

The **Nigiren Royale** is the company's top-of-the-line watch and is the latest in a long tradition of quality watch manufacturing. The Nigiren line has always featured superb quality and its image is synonymous with elegance. The **Royale's** elegance is complemented by performance features tuned to the needs of the most demanding sportsman.

The **Royale** has 218 precision parts delicately hand-assembled and is highly resistant to corrosion and high temperatures. It has a protective crown that is capped with a cabochon sapphire that conceals the stem. The bezel is unidirectional and the luminous hands turn on a mechanical movement that is based on a 18-ruby mechanism. A unique winding stem activates a 40-hour power reserve. The watch is tested and certified to be waterproof and can withstand the pressure at depths of over 600 feet.

The watch face has a scratch-proof mineral crystal and is seamlessly merged with the case. The bracelet is meticulously hand-crafted in gold and platinum and complements the watch's elegant design. The **Nigiren Royale** indicates time, date and day or night in any time zone. Its chronometric mode offers multiple timing options accurate to one-hundredths of a second.

According to buyer profile studies, the **Royale** has been a success with a variety of social groups ranging from high level professionals and entrepreneurs to blue collar technicians and workers. A common thread through these buyers is that most of them are successful in their chosen fields and are comfortable in their professional positions. As consumers, they have established preferences and they know what they want from a product.

Typically, **Royale** owners share a preference for high quality brands with a reputation for good value and a positive image. Regardless of differences in income and education, **Royale** owners share values of hard work and professionalism in their respective fields. This is also reflected in their choices as consumers. They are the kind of buyers who appreciate elegant, high quality craftsmanship and good service. The **Royale** retails for \$1289.95 at specialty watch dealers.

APPENDIX M  
QUESTIONNAIRE

PART A.

Consider the two watches described on the previous pages. Although both watches are acceptable, you are considering the purchase of one of them.

Please answer the following questions carefully. We are interested in your opinions and there are no right or wrong answers to these questions. We would like you keep in mind the reasons you are buying a watch which are mentioned in the task description. When answering the questions below, please feel free to go back to the previous sections and to review the task descriptions provided.

1. In your opinion, how desirable is the Pheoton Monarch relative to the Nigiren Royale? Circle the number that best represents your judgment.

Very	1	2	3	4	5	6	7	Very
undesirable								desirable

2. We would like you to divide 100 points between the Nigiren Royale and the Pheoton Monarch such that the division reflects the likelihood of your purchasing each watch. For example, if you are certain that you would buy the Pheoton Monarch and there is no chance of your buying the Nigiren Royale, the point allocation would be Pheoton Monarch = 100; Nigiren Royale = 0. If you are indifferent between the two watches, you should assign 50 points to each. Other divisions would reflect different likelihoods of purchase.

Pheoton Monarch	
Nigiren Royale	

3. If you had to choose one of the two watches, which one would you choose? Check only one.

Pheoton Monarch	
Nigiren Royale	

Worse Features	1	2	3	4	5	6	7	Better Features
-------------------	---	---	---	---	---	---	---	--------------------

Lower Quality	1	2	3	4	5	6	7	Higher Quality
------------------	---	---	---	---	---	---	---	-------------------

	Worse	1	2	3	4	5	6	7	Better	
Performance										Performance

Less Exclusive	1	2	3	4	5	6	7	More Exclusive
-------------------	---	---	---	---	---	---	---	-------------------

Less Prestigious	1	2	3	4	5	6	7	More Prestigious
------------------	---	---	---	---	---	---	---	------------------

Lesser Extent	1	2	3	4	5	6	7	Greater Extent
------------------	---	---	---	---	---	---	---	-------------------

PART C:

From this point on, please do not refer back to the task descriptions provided previously. Rather answer the questions as best as you can from memory or from your impressions so far. The Pheoton Monarch has been adopted by two social groups labelled as follows:

**Group A:** Established blue collar workers and technicians  
**Group B:** Independently wealthy individuals

Please answer the following questions keeping in mind the definitions of the two groups.

10. What is the level of education of the members of group A relative to that of group B members? Circle the number that best represents your judgment.

Much Lower	1	2	3	4	5	6	7	Much Higher
------------	---	---	---	---	---	---	---	-------------

11. What is the level of managerial skills required by the members of group A to perform their professional tasks successfully relative to that of group B members? Circle the number that best represents your judgment.

Much Lower	1	2	3	4	5	6	7	Much Higher
------------	---	---	---	---	---	---	---	-------------

12. What is the level of office skills required by the members of group A to perform their professional tasks successfully relative to that of group B members? Circle the number that best represents your judgment.

Much Lower	1	2	3	4	5	6	7	Much Higher
------------	---	---	---	---	---	---	---	-------------

13. What is the level of manual skills required by the members of group A to perform their professional tasks successfully relative to that of group B members? Circle the number that best represents your judgment.

Much Lower	1	2	3	4	5	6	7	Much Higher
------------	---	---	---	---	---	---	---	-------------

14. What is the level of job experience of the members of group A relative to that of group B members? Circle the number that best represents your judgment.

Much Lower	1	2	3	4	5	6	7	Much Higher
---------------	---	---	---	---	---	---	---	----------------

15. What is the level of job expertise of the members of group A relative to that of group B members? Circle the number that best represents your judgment.

Much Lower	1	2	3	4	5	6	7	Much Higher
---------------	---	---	---	---	---	---	---	----------------

16. In terms of social status how similar/dissimilar do you think groups A and B are? Circle the number that best represents your judgment.

Very Dissimilar	1	2	3	4	5	6	7	Very Similar
--------------------	---	---	---	---	---	---	---	-----------------

17. How strong do you believe are the social ties between members of group A and group B? Circle the number that best represents your judgment.

Not at all Strong	1	2	3	4	5	6	7	Very Strong
----------------------	---	---	---	---	---	---	---	----------------

18. What do you believe is the level of social interaction between members of group A and group B? Circle the number that best represents your judgment.

Low	1	2	3	4	5	6	7	High
-----	---	---	---	---	---	---	---	------

19. To what extent are the Pheoton Monarch adopters established blue collar workers and technicians? Circle the number that best represents your judgment.

Small Extent	1	2	3	4	5	6	7	Great Extent
-----------------	---	---	---	---	---	---	---	-----------------





25. Indicate your level of agreement/disagreement with the following statement: "You will be a member of the above described group three years from now." Circle the number that best represents your judgment.

Strongly	1	2	3	4	5	6	7	Strongly
Disagree								Agree

26. Indicate your level of agreement/disagreement with the following statement: "You aspire strongly to belong to the above described group." Circle the number that best represents your judgment.

Strongly	1	2	3	4	5	6	7	Strongly
Disagree								Agree

27. Please indicate your degree of agreement or disagreement with the following statements. Circle the appropriate number on the scale provided.

	Strongly disagree							Strongly agree
I usually form my impressions about products based upon who is using them	1	2	3	4	5	6	7	
I buy products and brands that none of my peers have	1	2	3	4	5	6	7	
A brand so exclusive that few people can afford it usually is a superior product	1	2	3	4	5	6	7	
I buy elegant and exclusive clothes to stand out from my peers	1	2	3	4	5	6	7	
I would rather go out once to an exclusive restaurant than more often to an ordinary	1	2	3	4	5	6	7	
In my household, we pay attention to the status implications of the products and services we use	1	2	3	4	5	6	7	

29. How realistic was it for you to imagine yourself buying watches of this type for yourself? Circle the number that best represents your judgment.

30. How interesting was the choice task in the study scenario? Circle the number that best represents your judgment.

31. How adequate was the information provided to you to perform the tasks in this study? Circle the number that best represents your judgment.

Not Adequate	1	2	3	4	5	6	7	Very Adequate
--------------	---	---	---	---	---	---	---	---------------

PART D

In this section we would like to obtain some information about you in order to develop a profile of the people who participated in this study. Let us reassure you again that this information is completely confidential and will not appear in any published report of the study. please circle the most appropriate response to each question.

32. Your sex: (a) Male \_\_\_\_\_ (b) Female \_\_\_\_\_

33. Your age: \_\_\_\_\_ years

34. Marital status: (a) Married \_\_\_\_\_ (b) Single \_\_\_\_\_

35. Ethnicity: (a) White (b) African-American (c) Hispanic  
(d) Native-American (e) Asian-American  
(f) other (please indicate) \_\_\_\_\_

36. Number of children: Total \_\_\_\_\_  
Living at home: \_\_\_\_\_

37. Nature of primary residence:

(a) own home (b) rented house (c) own apartment/condo  
(d) rented apt./condo (e) other (please indicate) \_\_\_\_\_

Zip Code of your residence: \_\_\_\_\_

38. Annual household income:

(a) under \$25,000 (b) \$25,000-\$49,999 (c) \$50,000-\$74,999  
(d) \$75,000-\$99,999 (e) \$100,000 or more

39. Your occupation (please state your job title and provide a brief description)

Job title: \_\_\_\_\_

Job description: \_\_\_\_\_

-----  
-----

40. Your highest level of education:

(a) Grade School (b) High School (c) Trade School  
(d) Some College (e) College Graduate (f) Graduate Degree

REFERENCES

Bearden, William O. and Michael J. Etzel (1982), "Reference Group Influence on Product and Brand Purchase Decisions," Journal of Consumer Research, 9(September), pp. 183-194.

Belk, Russel W., Kenneth D. Bahn, and Robert N. Mayer (1982), "Developmental Recognition of Consumption Symbolism," Journal of Consumer Research, Vol. 9 (June), 4-17.

Bensman, Joseph and Robert Lilienfield (1979). Between Public and Private: The Lost Boundaries of Self. New York: Free Press.

Blumberg, Paul (1974), "The Decline and Fall of the Status Symbol: Some Thoughts on Status in Post-Industrial Society," Social Problems, 21 (April), 480-498.

Bourdieu, Pi(1984), Distinction: A Social Critique of the Judgment of Taste. Harvard University Press.

Bourne, F.S. (1957), Group Influence in Marketing and Public Relations," in: Some Applications of Behavioral Research, eds. Likert, R. and S. P. Hayes. Basil, Switzerland: UNESCO.

Brinberg, David and Linda Plimpton (1986), "Self-Monitoring and Product Conspicuousness on Reference Group Influence," Advances in Consumer Research, Vol. 13, ed. Lutz, Richard J., Provo, UT: Association for Consumer Research.

Burghes, D.N. (1975), "Population Dynamics. An Introduction to Differential Equations," International Journal Math. Educ. Sci. Technol., 6, 265-276.

Burnkrant, R.E. and Cousineau, A. (1975), "Informational and Normative Social Influence in Buyer Behavior," Journal of Consumer Research, Vol. 2, 206-215.

Dawson, Scott and Jill Cavell (1987), "Status Recognition in the 1980s: Invidious Distinction Revisited," Advances in Consumer Research, Vol. 14, eds. Wallendorf, Melanie and Paul Anderson, Provo, UT: Association for Consumer Research, 487-491.

Deutsch, M. and Gerard, H.B. (1955), "A Study of Normative and Social Influence Upon Individual Judgments," Journal of Abnormal and Social Psychology, 51, 624-634.

Douglas, Mary and B. Isherwood (1979). The World of Goods: Towards an Anthropology of Consumption. New York: W.W. Norton and Company.

Dreyer, T.P. (1993), Modelling with Ordinary Differential Equations. CRP Press: Boca Raton, Florida.

Eco, Umberto (1976). A Theory of Semiotics. Bloomington, IN: Indiana University Press.

Eisenstadt, S.N. (1968), "Prestige, Participation and Strata Formation," in Social Stratification, ed. J.A. Johnson, Cambridge Press, 62-103.

Form, William H. and Gregory P. Stone (1957), "Urbanism, Anonymity, and Status Symbolism," American Journal of Sociology, 62, 504-514.

Fromkin, H.L. (1970), "Effects of Experimentally Aroused Feelings of Undistinctiveness Upon Valuation of Scarce and Novel Experiences," Journal of Personality and Social Psychology, 16, 521-529.

Goffman, Erving (1951), "Symbols of Class Status," British Journal of Sociology, 2, (December), 294-304.

Hausrath, A.R. (1975), "Stability Properties of a Class of Differential Equations Modelling Predator-Prey Relationships," Mathematical Biosciences, 26, 267-281.

Kelman, H.C. (1961), "Processes of Opinion Change," Public Opinion Quarterly, 25, 57-78.

Labov, William (1972). Sociolinguistic Patterns. Philadelphia: University of Pennsylvania Press.

\_\_\_\_\_ (1982). The Social Stratification of English In New York City. New York: Center for Applied Linguistics.

Lynn, Michael (1992), "The Psychology of Unavailability: Explaining Scarcity and Cost Effects on Value," Basic and Applied Social Psychology, 13(1), 3-7.

Park, Whan C., and Lessig, V.P. (1977), "Differences in Susceptibility to Reference Group Influence," Journal of Marketing, 50 (October), 135-145.



Reilly, Michael D. and Rathje, William L. (1985), "Consumption and Status Across Cultural Boundaries: Nonreactive Evidence," Advances in Consumer Research, Vol. 12, eds., Hirschman, Elizabeth C. and Morris B. Holbrook, Provo, UT: Association of Consumer Research.

Simmel, G. (1904), "Fashion," International Quarterly, 10, 130-155.

Snyder, C.R. (1992), "Product Scarcity by Need for Uniqueness Interaction: A Consumer Catch-22 carousel?" Basic and Applied Social Psychology, 13 (1), 9-24.

Tarde, Gabriel (1873). Les Lois D'Imitation.

Witt, Robert E. and G.D. Bruce (1972), "Group Influence and Brand Choice Congruence," Journal of Marketing Research, 9, 440-443.