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

NOTE TO USERS

**The original manuscript received by UMI contains pages with slanted print and margins that exceed the guidelines.
Pages were microfilmed as received.**

This reproduction is the best copy available

UMI

**Household Decision Making:
Relative Influence of Husbands and Wives in the 1990's
by
SHERI BAILEY, B. Comm.**

A thesis submitted to
the Faculty of Graduate Studies and Research
in partial fulfilment of
the requirements for the degree of
Masters of Management Studies
School of Business

Carleton University
Ottawa, Ontario
December 22, 1997
©copyright
1997, Sheri Bailey

National Library
of Canada

Acquisitions and
Bibliographic Services

395 Wellington Street
Ottawa ON K1A 0N4
Canada

Bibliothèque nationale
du Canada

Acquisitions et
services bibliographiques

395, rue Wellington
Ottawa ON K1A 0N4
Canada

Your file Votre référence

Our file Notre référence

The author has granted a non-exclusive licence allowing the National Library of Canada to reproduce, loan, distribute or sell copies of this thesis in microform, paper or electronic formats.

The author retains ownership of the copyright in this thesis. Neither the thesis nor substantial extracts from it may be printed or otherwise reproduced without the author's permission.

L'auteur a accordé une licence non exclusive permettant à la Bibliothèque nationale du Canada de reproduire, prêter, distribuer ou vendre des copies de cette thèse sous la forme de microfiche/film, de reproduction sur papier ou sur format électronique.

L'auteur conserve la propriété du droit d'auteur qui protège cette thèse. Ni la thèse ni des extraits substantiels de celle-ci ne doivent être imprimés ou autrement reproduits sans son autorisation.

0-612-32414-1

The undersigned recommend to
the Faculty of Graduate Studies and Research
acceptance of the thesis

**Household Decision Making:
Relative Influence of Husbands and Wives in the 1990's**

submitted by **Sheri Bailey, B. Comm.**

in partial fulfilment of the requirements for
the degree of Masters of Management Studies

Chair

School of Business

Department

Thesis Supervisor

CARLETON UNIVERSITY
January 22, 1998

Abstract

This study was designed to examine household decision making, more specifically, the relative influence of husbands and wives in the 1990s. This research sheds light on the complex process of family decision making by examining the effects of a husband's and wife's sex role orientation (SRO) as it relates to the decision-making process.

Two sets of hypothesis were proposed and tested using logistic regression analysis. The first set relates to the proposed relationship between a couple's SRO and their agreement on relative roles in decision making. The second set relates to the proposed relationship between a couple's SRO, the product being purchased and their relative influence in the decision-making process.

Through examination of previous research and analysis of data collected by Madill and Wooley (1995), the goal of this study was attained. The research shows the impact of SRO on the household decision-making process. A couple's SRO affects both the level of agreement between spouses about relative influence, and who dominates the decisions at each step of the decision-making process. Findings show the level of agreement to be higher for couples with similar sex role orientations. Consequently, as the difference between a husband and wife's SRO increases, the odds of agreement about relative influence decrease. Results also showed the decreasing domination of husbands in the household decision-making arena. As couples become more modern, decisions at each step of the process are increasingly joint, showing the continuing movement of household decision-making towards a more egalitarian decision-making environment.

Acknowledgments

It have travelled a long road and encountered many obstacles to reach this point. Without the support of numerous individuals, I don't know if I would have overcome these obstacles. I have to extend my deepest thanks to my thesis advisor, Professor Judith Madill. She not only provided valuable insight and information through her vast knowledge and expertise, but also provided emotional support through her positive outlook and encouraging words (and the occasional pep talk). I would also thank Professor Roland Thomas, Carleton University's statistical guru. Through detailed explanations (in layman's terms), Professor Thomas made difficult statistical analyses less intimidating and easier to understand. I would like to thank both of these Professors for the time and energy they spent to help me reach my goal.

In addition, my family and friends deserve equal mention for their support and patience through the entire Masters program. It has been a long haul, and I appreciate the encouragement they all provided.

Table of Contents

Title Page	i
Acceptance Form	ii
Abstract	iii
Acknowledgements	iv
Table of Contents	v
List of Tables	viii
List of Appendices	ix
Chapter 1: Introduction and Background Literature Review	1
Sex-Role Orientation	3
Definition	4
Measurement of SRO	4
Research on SRO	5
Durable & Non-Durable Purchase Decisions	6
Research	6
Summary	12
Financial Management and Savings Decisions	12
Research	12
Summary	15
Household Division of Labour & Its Effects	16
Research	16
Summary	18
Demographics	18
What Can Be Concluded	20
Problems with Existing Research Literature	20

Chapter 2: Hypotheses	22
Sex Role Orientation & Agreement Between Spouses on Relative Roles in Decision Making	22
Hypothesis 1 - Similar Sex Role Orientations	24
Hypothesis 2 - Mixed Sex Role Orientations	24
Sex Role Orientation & Relative Influence of Husbands & Wives in the Decision- Making Process	24
Hypothesis 3 - Similar Sex Role Orientation Couples	25
MM Couples	25
TT Couples	26
Hypothesis 4 - Mixed Sex Role Orientation Couples	26
MT Couples	26
TM Couples	26
Chapter 3: Research Methodology	27
Research Design	27
Sampling Methodology	27
Data Collection Instruments	28
Sex Role Questionnaire	28
Durable Product - Decision Making Questionnaire	29
Data Analysis	31
Hypotheses 1 and 2	32
Hypotheses 3 and 4	34
Chapter 4: Research Findings	36
Sample Description	36
Sex Role Orientation & Agreement Between Spouses on Relative Roles in Decision Making	38
Initiates the idea to purchase the product (Step 1)	40
Information Search - Asks friends about the product (Step 8)	41
Information Search - Collects information from ads (Step 9)	42
Makes the final decision to purchase the product (Step 12)	43

Sex Role Orientation, Product Category & Relative Influence of Husbands & Wives in the Decision-Making Process	44
Step 1 Initiates the idea to purchase the product	46
Wives' Response Data	46
Husbands' Response Data	50
Step 8 Asks friends about the product	53
Wives' Response Data	53
Husband's Response Data	56
Step 9 Collects Information from ads about the product	60
Wives' Response Data	60
Husbands' Response Data	63
Step 12 Makes the final decision to purchase the product	66
Wives' Response Data	66
Husbands' Response Data	68
Chapter 5: Discussion of Findings	72
Hypotheses 1 and 2	72
Hypotheses 3 and 4	73
Group 1 Products	75
Group 2 & Group 3 Products	76
Summary	78
Chapter 6: Conclusion	81
Strengths and Limitations	81
Implications for Researchers	82
Implications for Managers	82
Future Research	85
Conclusion	85
References	87

List of Tables

Table	Page
1. Product Classification, Davis & Rigaux 1974	25
2. Respondents Annual Income Level (after tax)	36
3. Respondents Age in Years	37
4. Husband and Wives Education Level	37
5. Husband and Wives Sex Role Scores	38
6. Summary of Results for Hypotheses 1 and 2	41
7. Product Grouping & Product Examples Included in each Group	46
8. Summary of Results - Wives' Data for Step 1	48
9. Summary of Results - Husbands' Data for Step 1	51
10. Comparison of Models for Step 1	53
11. Summary of Results - Wives' Data for Step 8	54
12. Summary of Results - Husbands' Data for Step 8	57
13. Comparison of Models for Step 8	60
14. Summary of Results - Wives' Data for Step 9	61
15. Summary of Results - Husbands' Data for Step 9	64
16. Comparison of Models for Step 9	65
17. Summary of Results - Wives' Data for Step 12	66
18. Summary of Results - Husbands' Data for Step 12	69
19. Comparison of Models for Step 12	71
20. Summary - Discussion of Findings	78

Appendices

Appendix	Page
A. Marital Roles in 25 Decisions - Davis & Rigaux 1974	91
B. British Household Panel Study - Sex-Role Questionnaire	92
C. Decision-Making Questionnaire	93
D. Scatter Plot Generated with Respondents Sex Role Scores	94
E. Description of Variables & Symbols Included in the Analysis	95

Chapter 1

Introduction

Consumers are the lifeblood of an economy. A clear understanding of their needs, wants and behaviours is vital to the success of any organization attempting to market to them.

According to Statistics Canada, Canadian consumers spent \$460,033 million and \$477,927 million on consumer goods and services in 1995 and 1996 respectively. As of the third quarter of 1997, personal expenditures on consumer goods and services were reported to be \$509,802 million.

Consumer dollars represent a large pool of potential profits. Statistics Canada reports Canadian consumers, in the second quarter of 1997, represented \$518.3 billion of personal disposable income with an average (after tax) expenditure per household of \$45,548 (1992) (Ontario - \$50,161).

As evidenced by these statistics, the Canadian household represents a major spending unit and therefore deserves adequate attention in relevant research. In addition, the increasing presence of women in the workplace has led to a change in the roles assumed by both men and women in the home. Traditionally, men have been the breadwinners and decision makers of the family, whereas women have been the nurturers, care givers and housekeepers. Today, women and men share the role as breadwinners, hence the role of decision maker is no longer solely dominated by the male in the family. Recognizing that many consumer decisions are not made by individuals but rather by a combination of people in a household (e.g. husband and wife, wife and child, husband

and child) and considering the potential profits that households represent, researchers must now look to all members of a household when studying consumer behaviour.

The relationship between marital roles and decision making has been of interest to researchers (primarily those in marketing, psychology and sociology) for decades [e.g. Albercht, (1979); Green & Cunningham, (1975); Ferber & Lee, (1974); Davis, (1970); Tomeh, (1970)]. The decision- making process of a traditional couple is seen as quite simple because the roles of each spouse are clearly defined and therefore conflict rarely arises. On the other hand, as couples become more modern, their roles become increasingly flexible and, as a result, their decision-making process becomes more complex (Brinberg & Schwenk, 1985). Household decision-making roles are less predetermined than in the past, therefore examination of the roles men and women assume within the family has become vital.

The purpose of this thesis is to examine the household consumer decision-making process. This research will shed light on the complex process of family decision making by examining the effect of sex-role orientation (SRO) on it. The focus of this thesis is the purchase decision of a durable product, however, the background literature will examine non-durable purchase decisions, financial management, division of domestic labour and demographics in order to gain a better understanding of the effects of SRO.

Background Literature

Background literature is an important factor in any new research endeavour. It provides potentially valuable information regarding strengths and weaknesses of existing research. The review of methodologies and results will aid in preventing the repeat of

mistakes made by other researchers and in assisting in the analysis and interpretation of new findings by providing insight into successful techniques used in existing literature.

In order to get an overall picture of what has been done in the area of consumer decision making, it was necessary to examine research studies and theoretical writings in two major fields, namely marketing (consumer behaviour) and sociology (marriage and the family). Many issues arose in the readings, and have been addressed in turn. The first issue discussed in the background literature section is SRO, its definition, importance and measurement. Other sections examine previous research on husband/wife consumer decision making. This includes an examination of research on the roles of husbands and wives in decisions concerning purchases of durable and non-durable goods, followed by an examination of the literature on financial management and savings decisions. The division of domestic labour, in conjunction with SRO and its effects on marital satisfaction is also addressed, followed by the impact of demographic variables on the decision-making process. Finally, a summary of the literature is provided, including an analysis of strengths and weaknesses identified throughout the review.

Sex-Role Orientation

A great deal of research has been conducted in consumer behaviour, with respect to husband/wife decision making, as well as in the roles held and functions performed by husbands and wives within the family. Evidence suggests that SRO plays a major role in the process of family decision making (Qualls, 1987) and that it should therefore be included as a variable in the decision environment that affects the family decision-making process (Qualls, 1981). Marital roles are measured based on the SRO, sex-role attitude

(SRA), or sex-role norm (SRN) of both spouses. The terminology used in the studies varies, however the definition remains the same. SRO, SRA and SRN are defined conceptually as the attitudes, values, opinions, behavioural standards and cultural norms that define the appropriate behaviour for men and women in their society (Qualls, 1981).

Measurement of SRO. SRO is most often measured using a Likert-type scale. There have been many scales developed (e.g. Arnott's Autonomy Inventory, Scanzoni's Sex Role Scale and Bem's Sex Role Inventory), but most follow a general format. A scale used in many studies is that created by Osmond and Martin in 1975 (Kim & Lee, 1989; Qualls, 1981; Rosen & Granbois, 1983).

The Osmond-Martin Sex Role Attitude (SRA) Scale, is a 32- item Likert-type scale with five response categories (from "strongly agree" to "strongly disagree"). The SRA scale was conceived on the basis of four a priori components: first, familial roles of females and males; second, extra-familial roles of each sex; third, stereotypes of male/female characteristics and behaviours; and, fourth, social change as related to sex roles (SRs).

The Osmond-Martin SRA scale is intended to tap several components of SRs and of sex-role-related assumptions and behaviours. The scale analyses attitudes at both ends of the continuum, with dichotomous differentiation and typing of social roles on the basis of sex at one end (traditional) and non-differentiation and/or non-typing of roles on the basis of sex at the other extreme (modern). In addition, the Osmond-Martin SRA scale attempts to analyse attitudes towards the roles of both sexes, not only the female.

Although other scales may be used to measure SRO, the Osmond-Martin method provides a good explanation of the general procedure used in analysis.

Research on SRO. The SRO of both the husband and wife has been demonstrated as significantly influencing family decision making (Schaninger, Buss & Grover, 1982). As couples become more modern, evidence suggests a decrease in the relative influence of the husband and an increase in the wife's relative influence, illustrating the impact SRO has on the decision-making process (Webster, 1995). Different SRNs affect numerous aspects of daily life. The differences may lead to different task allocations (i.e. who does the laundry, cooking and cleaning in a household), purchase responsibilities (who is responsible for each phase of the decision) and marital outcomes (satisfaction/ dissatisfaction). The research in this area suggests that SRO is very significant to the decision process.

Although research suggests that SRO is significant and should be included as a variable when examining household decision making, it should be noted that results of the research may be product specific and cannot be generalized across all product categories (Davis, 1970; Green & Cunningham, 1975). Typically, household decisions are characterized as being husband dominant (the husband has more influence on decisions than the wife, e.g. life insurance), wife dominant (the wife has more influence on decisions than the husband, e.g. kitchenware, wife's & children's clothes, food), syncretic (the husband and wife have equal influence in a decision, e.g. housing, vacations, children's toys and education) and autonomic (the decision is wife-dominant 50% of the time and husband-dominant the remaining 50%, e.g.. garden tools, alcoholic

beverages) (Davis and Rigaux, 1974). In Davis' (1970) study, when comparing, for example the percentage of husband-dominant families in two decisions (where to buy the automobile and where to buy the furniture) the results differed. The first decision in this scenario is characterized by a large proportion of husband-dominant families, while the second is witnessed by less than 10% of the families as husband dominant. It is important to address this issue when analysing data. Making general statements about decision patterns without regard to the product being purchased could result in incorrect information or the omission of valuable information.

The importance and effects of SRO on the decision-making process have been examined from many perspectives and regarding many products, services and tasks. Purchases of durable goods such as furniture, automobiles, major appliances, and homes are studied when examining the decision process and the roles husbands and wives take at different phases within the process. Other common decisions often examined in the literature include non-durables, such as vacations, insurance, children's education, financial management and household division of labour. These durable and non-durable purchase decisions will be examined in the following section.

Durable & Non-Durable Purchase Decisions

Research regarding household decision making was consolidated by Harry Davis in a seminal paper in 1970. Harry Davis was one of the first researchers to receive notoriety for his work in the area of husband/wife decision making. Continuing through the seventies, Davis wrote many papers that, to this day, are used as reference for current research.

In 1970, Davis administered questionnaires to 100 families to determine the relative influence of each spouse over different decisions (i.e. when and where to buy, colour, model and amount to spend) with regard to the purchase of furniture and automobiles. He also examined the extent of agreement that existed between the responses given by husbands and wives in their perception of their marital roles.

Davis found a considerable amount of variability and that few distinct patterns were discernable. It was difficult to generalize about the roles each spouse assumed in decision making without specific reference to the product being purchased. A high level of agreement in husband/wife perceptions of relative influences in purchasing decisions was found when responses of husband and wives were compared as a group. The largest disagreements occurred for decisions that involved aesthetic considerations, such as colour, style and model. However, the level of agreement between husbands and wives within the same family was low. Agreement about their roles in decision making averaged 63% for the six automobile purchase decisions and 61% for the six furniture purchase decisions. Davis identified the relationship between relative influence and role consensus as a possible cause for disagreements between spouses. Couples with highly specialized roles (i.e. traditional SRO) might display high consensus given less ambiguity about "who decides," where as couples sharing decisions more equally (i.e. modern SRO) exhibit a higher level of disagreement.

In 1974, Davis and Benny Rigaux surveyed 73 households with respect to 25 household purchases at three different phases of the decision-making process: problem recognition; internal and external search; and final decision. The purpose of the study

was to determine whether marital roles differed with each phase of the decision process. Each purchase was analysed independently and the changes in marital roles were identified.

Findings of this study were depicted diagrammatically to display all decisions simultaneously. Each decision was positioned in terms of two axes, relative influence of husbands and wives, and extent of role specialization. The diagram was presented in the form of an inverted triangle with four sectors -- wife-dominant, autonomic, husband-dominant and syncratic (Appendix A). Separate triangles and arrows were used to show the movement and direction of each decision through the three phases of the decision-making process (problem recognition, internal and external search and final decision).

Analysis indicated 13 of the 25 decisions (housing upkeep, appliances, husband's clothing, savings, car, tv/stereo, housing, living room furniture, children's toys and school, concerts, movies and theatre, family vacations) were syncratic for the final decision as compared with only six or seven in the earlier stages. A corresponding change was apparent for the autonomic patterns in the final stage (five decisions as compared to ten and nine).

Continuing the analysis, 16 of the 25 decisions remained in the same pattern of influence throughout all phases of the decision process. Life and other insurance remained husband- dominant, while decisions regarding kitchenware, household cleaning products, wife's and children's clothes, as well as food and non-alcoholic beverages stayed wife-dominant. The syncratic sector comprised decisions about housing, living room furniture, children's toys and school, concerts, movies and theatre, as well as family

vacations, for all three stages. Finally, three decisions -- garden tools, alcoholic beverages and non-prescription drugs, remained autonomic.

Others followed Davis in examining husband/wife decision making in consumer purchases. Robert Green and Isabella Cunningham (1975) introduced the idea of sex roles into their research. They examined the impact of SRO on household decision making.

Green and Cunningham surveyed 257 married women about ten products and services with the objective of determining the impact that the changing role of women has upon family purchasing patterns. Central to this study was the measurement of the impact SRO had on decision-making influence. Based on SRO scores, respondents were classified as conservative (identified with traditional roles of women), moderate or liberal (identified with contemporary roles of women).

Analysis of the data indicated that furniture purchases were classified as joint with substantial wife influence for all three groups: traditional; moderate; and liberal. Housing decisions were joint across all three groups. Husbands of liberal wives were reported to make fewer decisions than husbands of conservative and moderate wives for major appliances, automobiles and vacations, showing a shift away from a traditional husband dominated decision environment.

Green and Cunningham's research showed a trend toward less husband decision making in households where the wife was characterized by contemporary attitudes toward the female role. However, it is important to note that not all women who possessed contemporary attitudes toward the female role were necessarily more autonomous in their

buying decision and that such attitudes may have more pronounced impact on some products than others. For example, it was found that groceries were wife- dominant, life insurance decisions were husband-dominant and furniture was basically jointly decided, with substantial wife influence. It was also found that family savings were split between joint and husband-dominant decisions and housing decisions tended to be made jointly. These finding were not related to the attitude women held with regard to their role.

Based on 117 in-home interviews and questionnaires, William Qualls conducted research in 1981 to determine the impact of a family member's SRO on influence patterns for several household decisions. Findings indicated that traditional and modern wives exhibited patterns of influence perception similar to each other and that traditional husbands perceived their levels of influence to be higher than did their wives and moderate husbands for decisions regarding automobiles, housing, insurance and vacations. In addition, it was found that levels of joint influence perceived by spouses who were SR modern was higher than that perceived by SR traditional spouses, demonstrating a trend toward an egalitarian decision process.

In 1982, Charles Schaninger, W. Christian Buss and Rajiv Grover examined the effect of sex roles on family finance handling and decision influence. In their study, 409 couples under the age of 30, who where non-homeowners and married for the first time were surveyed. Each couple was placed into one of four groups based on their SRO score. Separately, husbands and wives were asked to indicate, on a three-point scale [husband (1), both (2), wife (3)], who decided each of four aspects of their last major durable purchase, "who made the initial decision to buy," "who decided when to buy,"

"who decided how much to spend." and "who decided where to buy." Analysis indicated that sex role modern families showed less husband and more joint and wife influence over three of the four aspects of their last durable purchase including: deciding to buy, where and when to buy.

In 1985, David Brinberg and Nancy Schwenk interviewed 41 couples about purchase decisions relating to homes, home furnishings, investments, automobiles and home entertainment equipment. The objective of the study was to examine the interaction process that occurred between husbands and wives while making a decision (their sex roles were taken into consideration during the analysis, in terms of contemporary vs. traditional couples). It was found that modern couples go through a more complex decision process. In addition, modern couples were less likely to find themselves in a situation where disagreement by one party was followed by disagreement by the other party, husbands were more likely to agree with their wives and the more modern the husband, the less likely the wife was to give commands to him.

Also examined in the literature are the effects of SRO and product involvement (i.e. high, medium and low) on a family's decision-making process. In 1995, Cynthia Webster administered questionnaires to 175 husband and 175 wives (not necessarily couples) regarding the purchase of 25 durable goods and services (which included goods and services from three involvement groups: high, medium and low). In addition to the product involvement, other factors such as years alone before marriage, personality and childhood were included in the analysis of marital roles/power.

Findings indicated, for high involvement purchase decisions, wives with relative

modernity in SRO, years before marriage, self esteem, decision-making power at work, resources and aggressiveness led to joint decision making. Conversely, relative confidence in spouse, willingness to please and need for approval led to husband-dominated decision making.

Summary. Research examining the family decision-making process involved in the purchase of durable and non-durable goods and services indicates a movement toward more joint decision making within the household. However, it is important to remember that the results cannot be generalized across all product categories. Therefore each product/service must be considered when analysing the decision process.

The above discussion addressed the issue of household decision making with regard to the purchase of durable and non-durable products. The following section includes findings related to financial management and savings decisions in the background literature.

Financial Management and Savings Decisions

The effects of family SRO not only impacts the purchase decisions of durable and non-durable goods and services, it also impacts family financial management (e.g. payment of bills, keeping track of expenditures) and savings decisions. The ensuing discussion examines the findings regarding these decision areas.

In 1988, E.S. Moore-Shay and W.L. Wilkie examined the duties of the family financial officer (FFO) (i.e. payment of bills, keeping track of expenditures, decisions on the use of leftover funds at the end of the pay period), in a longitudinal study to see if any changes occurred in who assumes the role of FFO. A shift was observed from Year 1 to

Year 2. In Year 1, the duties of the FFO were performed jointly with a shift toward the wife only as the FFO in Year 2.

In 1983, Dennis Rosen and Donald Granbois interviewed 82 couples regarding their roles in financial management. The interviews covered two broad areas of financial management activities: implementation and decision-making activities. Clear distinctions between implementation (bookkeeping and other paper handling activities, i.e. balancing the check book and paying bills) and decision making financial activities (who decides the method and amount of savings, what to do with leftover money at the end of the month, budgeting/spending of income and priority for paying bills) were discovered.

Principal component analysis was used to determine if any subgroupings of kinds of tasks, based on similarity, were necessary. Upon analysis, subgroupings of tasks became evident (in order to increase explanation power). Within tasks related to decision-making financial activities, it was found that paying bills and deciding on amounts to pay for three different credit cards (Group 2) grouped separately from all other (Group 1) decision tasks.

Further analysis identified the most important variables in determining family financial role structure for each of the implementation and decision task groupings. Wife's SRA and education, husband's SRA and education and husband/ wife social change as related to SR view were clearly significant for implementation tasks across all indicators. In this instance, the wife tends to be in charge when the husband's and wife's SRAs and social change are more traditional and when education is low.

Group 1 decision task analysis indicated that only the locus of control variable was significant. The result indicated that separate decision making is more likely to occur for these tasks (ownership/number of checking accounts, method of financing and savings, handling leftover money and amount in budget) when the couple has an external locus of control.

For Group 2 decision tasks (payment amounts on credit card accounts and paying bills), wife's working status and motivation made the greatest contribution to the discriminant function. This indicated that these financial decisions are more likely to be made by the wife and husband separately when the wife is working for financial reasons. Also significant was the 'family life cycle' component, indicating that separate decision making increases with years married and family income level.

Other findings in the area of financial management include Green and Cunningham's (1975) results that indicated savings decisions were split between joint and husband-dominated across all three SR groups: conservative, moderate, and liberal. Liberals reported less joint handling of money and bills than did SR moderates and conservatives.

Qualls (1981) found that traditional husbands perceive their levels of influence to be higher than did their wives and moderate husbands specifically in savings decisions. Traditional husbands rated the decision of how much to save each period as strongly husband-dominant, and modern husbands felt the pattern should be slightly husband-dominant, yet both traditional and modern wives felt that the pattern should be one of joint influence.

Schaninger, Buss and Grover's (1982) findings indicated SRs of both husband and wife were shown to significantly influence family finance handling and decision making. Sex role modern families showed less wife and greater joint and husband influence in areas traditionally assigned to the wife (food and beverages, appliances, clothing, house furnishings, paying bills, housing expenditures, utilities, gifts and contributions and distribution of leftover money). For those areas traditionally dominated by the husband (transportation, recreation and savings), results indicated less husband but more joint and wife influence.

In 1989, Chankoon Kim and Hanjoon Lee analysed data that was part of a survey of home purchasers, for the purpose of identifying the degree of task sharing within the household. Data were collected via questionnaires from 87 couples. Included in the questionnaire were 17 family financial management activities and household tasks for which each spouse was asked to assess his/her relative participation on a five-point scale. The findings indicated that couples with more SR modern wives were likely to take a more egalitarian approach in deciding/handling expenses and savings decisions.

Summary. The research shows a strong presence of female influence in family financial management. Although there seems to be little joint decision making with regard to financial management and savings decisions, there does seem to be a great deal of autonomic decision making.

In the section that follows, the effects of SRO on the division of domestic labour (i.e. cooking, cleaning and laundry) and marital outcomes will be discussed.

Household Division of Labour & Its Effects

SRO affects many aspect of daily life. including the division of household labour. Although task allocation is not related to the decision-making process, research in the area provides valuable information about the effects of SRO on the household. The research discusses the impact of SRO on male participation in domestic labour and the repercussions for marital satisfaction.

When examining the effects of SRs on the division of labour in the household, Kim and Lee (1989) found that in the division of labour for performing domestic chores (e.g. laundry, cooking, washing dishes and house cleaning), which traditionally fall under the woman's responsibility, wives with more modern SRA obtained a greater extent of involvement from their husbands.

Recent research done by Theodore Greenstein (1996) examined the effect of gender ideologies on the division of household labour. Gender identities are self definitions such as male or female, while ideologies are the elements that make up that definition (e.g. believing domestic labour is women's work). Completed questionnaires from 2,719 married couples (with both husband and wife under the age of 65) were analysed. Respondents were asked to indicate "the approximate number of hours per week that you, your spouse/partner, or others in the household normally spend" preparing meals, washing dishes, cleaning house, doing outdoor tasks, shopping, washing and ironing, paying bills, doing auto maintenance, and driving other household members to work and school. In addition, participants were asked a series of questions that were

analysed using a gender-ideology scale. A high score [i.e. strongly disapprove (7) or strongly disagree (5) vs. strongly approve (1) or strongly agree (1)] indicated a more traditional gender ideology.

Findings indicated that a husband's gender ideology is not related to the division of household labour for men married to traditional wives but it is for men with egalitarian wives. Results showed that husbands do relatively little domestic labour unless both the husband and wife are relatively non-traditional in their beliefs about gender and marital roles.

In the Second Shift, Arlie Hochschild (1989) surveyed 145 people (50 two-job couples and 45 other people) through a combination of questionnaires and in-depth observations to examine work and family. As done by Greenstein in 1996, Hochschild stressed the importance gender ideologies play in the second shift (division of household labour and childcare). The issue of gratitude played a major part in this work. For example, the author argues that because traditional wives view the home as their responsibility, they feel gratitude for any assistance from husbands in domestic chores. Hochschild states the interplay between a man's gender ideology and a woman's implies a deeper interplay between his gratitude toward her, and hers towards him. How a person wants to identify himself or herself influences what, in the back and forth of marriage, will seem like a gift and what will not. The research findings overall indicated wives seemed to feel more grateful to their husbands than their husbands felt toward them.

In 1992, Susan McHale and Ann Crouter interviewed 153 families to examine the implications of internal inconsistency between spousal SRAs and the division of family work on wives' and husbands' evaluations of their marriages. It was found that incongruities led to marital dissatisfaction. Non-traditional wives with traditional family roles and traditional husbands with non-traditional (egalitarian) family roles were prime candidates for marital dissatisfaction.

Summary. Research shows that regardless of husband/wife SRO, household tasks such as cooking, cleaning, preparing meals and doing laundry, are, for the most part, assigned to the woman, thus maintaining the traditional stereotype of the female homemaker. As explained, this can lead to incongruities between a couple's SRs and, in turn, lead to marital dissatisfaction. The exception to this occurs when both the husband's and wife's sex roles are modern, which may result in an increase of male participation in domestic labour.

Finally, additional variables will be entered into the equation in the hopes of further clarifying the family decision- making process. Demographic variables such as income level, age, stage in the family life cycle and education will be examined.

Demographics

In conjunction with SRO, demographic variables have been examined in search of clarification of the complex decision process. To find clarification, researchers have looked to specific variables that describe households. The purpose of this analysis is to uncover decision-making patterns within groups of households with similar demographic characteristics.

Green and Cunningham (1975) found family purchasing roles tended to vary between different income classes. Significantly less husband decision making was found among upper-income liberals (modern), while middle-income liberals exhibited significantly more wife decision making than the other groups.

Age is another demographic variable examined in household decision-making research. When examined by Green and Cunningham (1975), findings showed that liberals under the age of 35, reported significantly less husband decision making than conservative and moderates. Middle-age (35 to 49) liberals indicated significantly fewer husband-dominated decisions and more wife participation than other groups and those 50 and above exhibited no significant differences between groups.

Rosen and Granbois (1983) entered education into the equation and found that wives tended to be in charge of the implementation of financial activities (bookkeeping and other paper-handling activities) when husband/wife SRAs and social views were more traditional and when educational levels were low. Rosen and Granbois also examined income level and "family life cycle," findings indicated that separate decision making increased with years married and family income level for decision related to payment of bills and payment of amounts on credit cards.

As shown by the research, analysis of the decision-making process requires inclusion of many different variables. In conjunction with SRO, income level, age, level of education, stage of the family life cycle all impact the family decision-making process.

What Can Be Concluded

It has been stated that it is difficult to generalize about the roles each spouse assumes in a particular decision without specific reference to the product being purchased or the decision being made. However, when looking at the research as a whole, it is possible to identify a trend. Women are gaining increasingly more influence in the decision-making process. In the majority of situations, the decision-making environment is no longer characterized solely as husband-dominated but rather as increasingly egalitarian.

Problems with the Existing Research Literature

The research in the area of household decision making provides valuable information. However, much of the research is dated (e.g. Schaninger, Buss & Grover, 1982; Green & Cunningham, 1975; Davis & Rigaux, 1974; Davis, 1970) and the sample sizes used are quite small (e.g. 100 families, 73 households, 41 couples). In addition, many of the studies used only wives or only husbands in their sample. Researchers suggest that both spouses should be included in a representative sample in order to capture the differences between the factors that may influence their behaviours (Asser and Bobinski Jr., 1991). To rely only on wives' responses is incomplete and misleading (Davis, 1970).

Another weakness presents itself when comparing the results of different studies since no universally accepted measure of SRO has been developed. Therefore the use of different SRO scales makes comparison difficult (Qualls, 1987).

All research is based on the premise that people go through a decision process for every purchase/decision made. In 1979, Richard Olshavsky and Richard Granbois argued that this was not necessarily the case, and that not every decision follows a process (i.e. internal and external search, alternative evaluation etc.). Olshavsky and Granbois stated that a significant proportion of purchases may not be preceded by a decision process and that for many purchases a decision process never occurs, not even on the first purchase. If there is any validity to Olshavsky and Granbois' claim, the basis for a significant portion of household decision-making research is open to criticism.

These criticisms leave room for further work in the area of household decision making. Research that takes into consideration some of the weakness of past studies will be a valued addition to existing results.

After consideration of the strengths, weakness and results of previous research, a methodology has been developed to incorporate some of the concerns identified. Some of the concerns that will be addressed in this thesis include the surveying of both the husband and wife from each household and the use of a large sample. In addition, to address the concerns of Olshavsky and Granbois, a "nobody" option will be provided to respondents in the event that each phase of the decision process was not passed through on the way to the final decision. This research will, therefore, add valuable information to existing literature.

The section to follow, will present the proposed relationships to be studied. Immediately following the hypothesis section, a detailed research methodology will be outlined (including issues stated above).

Chapter 2

Hypotheses

It is the intent of this thesis to examine 4 hypothesized relationships. Hypotheses 1 and 2 relate to the proposed relationship between a couple's SRO and their agreement on relative roles in decision making. Hypotheses 3 and 4 relate to the proposed relationship between a couple's SRO, the product being purchased and their relative influence in the decision-making process.

Sex Role Orientation & Agreement Between Spouses on Relative Roles in Decision Making. Research suggests that sex role orientation plays a major role in the process of family decision making (Green & Cunningham, 1975; Qualls, 1981, 1987; Schaninger, Buss & Grover 1982; Webster, 1995). Results of numerous studies (Brinberg & Schwenk, 1985; Green & Cunningham, 1975; Kim & Lee, 1989; Qualls, 1981; Schaninger, Buss and Grover, 1982) have shown the sex role orientation of both the husband and wife to significantly influence family decision making.

The roles men and women assume are dependent on their gender ideology [gender identities are self definitions such as male or female, while ideologies are the elements that make up that definition (e.g. believing domestic labour is women's work)] (Greenstein, 1996). A gender ideology is often rooted in early experience, and fuelled by motives formed early on and such motives can often be traced to some cautionary tale (e.g. seeing your mother being treated like a doormat by your father) in early life (Hochschild, 1989). A woman's gender ideology determines the sphere she wants to identify with (home or work) and how much power in the marriage she wants to have

(less, more or the same amount). The 'pure' traditional woman wants to identify with her activities at home (as a wife, a mother), wants her husband to base his activities at work and wants less power than he. The traditional man wants the same. The 'pure' egalitarian wants to identify with the same spheres as her husband does, and to have an equal amount of power in the marriage (Hochschild, 1989).

Research done by Davis (1970) found a high level of agreement in husband-wife perceptions of relative influences in purchasing decisions when compared as a group, however, the level of agreement between husbands and wives within the same family was low. Davis suggests, as a possible explanation for the low level of agreement, the relationship between relative influence and role consensus. Couples with highly specialized roles (i.e. both spouses have traditional sex role orientation - TT) might display high consensus given less ambiguity about "who decides", whereas couples sharing decisions more equally (i.e. both spouses have modern sex role orientation - MM) exhibit a higher level of disagreement. One could deduce from this analysis that having a mixed sex role orientation MT (Modern wife / Traditional husband) or TM (Traditional wife / Modern husband) would cause higher levels of ambiguity and therefore result in even higher levels of disagreement than couples with similar SROs. Disagreement often results because of differing SROs. As explained above, egalitarian and traditional individuals identify with different spheres and expect different amounts of power in the marriage. In the case of household purchase decisions, factors such as view of power and type of product can lead to disagreement between a couple. Marital power can stem from being the decision maker in family decisions. If one spouse feels their power is being

threatened, a family decision can present the opportunity for disagreement occurring. Individuals often see products as part of a husband's or wife's domain. When spouses possess different sex role orientations, their perceptions about who should make the decision regarding the product in question may differ, again resulting in disagreement. The hypotheses representing the relationship between sex role orientation and agreement about relative influence are presented in terms of couples with similar SROs (TT or MM) and mixed SROs.

The following two hypotheses are proposed based on Davis' findings and past research:

1. Couples with similar sex role orientations (TT or MM) will have a high level of agreement about the roles each assume within the family decision-making process.
2. Couples with mixed sex role orientations (MT or TM) will have a low level of agreement about the roles each assume within the family decision-making process.

Sex Role Orientation & Relative Influence of Husbands & Wives in the Decision Making Process. Research suggests that the individual who makes the decision to purchase a durable product varies depending on the product being purchased (Davis, 1970; Green & Cunningham, 1975). In 1974, Davis and Rigaux surveyed respondents with respect to 25 household products at three different phases of the decision making process: problem recognition; internal and external search; and final decision. The following classification (Table 1) shows who (husband or wife) has the greater influence in the purchase of durable products as reported by Davis and Rigaux in 1974.

Table 1 - Product Classification (Davis & Rigaux, 1974)

	Wife Dominant	Joint	Autonomic
Stage 1- Problem Recognition	Kitchenware Other Furniture	TV/Stereo Living Room Furniture	Appliances
Stage 2 - Internal / External Search	Kitchenware Other Furniture	Living Room Furniture	TV/Stereo Appliances
Stage 3 - Final Decision	Kitchenware Other Furniture	Appliances Living Room Furniture TV/Stereo	

The Davis and Rigaux study did not incorporate SROs into their analysis. This study will build on their work by incorporating the measurement of SRO. Based on the Davis and Rigaux (1974) findings, and the reviewed background literature on sex roles, the following hypotheses are proposed:

Similar Sex Role Orientation (MM and TT couples)

It was hypothesized above that couples with similar SROs experience a high level of agreement. Therefore, hypothesis 3a. through 3c. are proposed for both husbands and wives (respond the same).

MM Couples (Modern wives and Modern husbands)

- 3a. For products which fall into group 1 (kitchen appliances, furniture and indoor maintenance), initiating the idea to buy the product, asking friends about the product, and collecting information from ads about the product are dominated by the wife, while making the final decision to buy is done jointly.
- 3b. For products which fall into groups 2 and 3 (entertainment & electronics and outdoor maintenance and equipment), initiating the idea to buy the product, asking friends about the product, and collecting information from ads about the product are dominated by the husband, with an increasing amount of wife input / participation. The final decision to buy is done jointly.

TT Couples (Traditional wives and Traditional husbands)

- 3c. For products which fall into groups 1, 2 and 3, initiating the idea to buy the product, asking friends about the product, collecting information from ads about the product and making the final decision to buy are dominated by the husband.

Mixed Sex Role Orientation (MT and TM couples)

As earlier hypothesized, mixed couples are expected to experience a high level of disagreement regarding who has the greater relative influence in the purchase of a durable product. It is also expected that couples with mixed SROs will make fewer joint decisions because of lack of role consensus. Therefore the hypotheses for mixed SRO couples are dependent on the sex role, product and gender of the respondent (the following hypotheses are based on the expected outcomes of hypothesis 3).

MT couples (Modern wife / Traditional husband)

- 4a. Modern wives will report decisions are made in the same manner as are those of MM couples.
- 4b. Traditional husbands will report decisions are made in the same manner as are those of TT couples.

TM couples (Traditional wife / Modern husband)

- 4c. Traditional wives will report decisions are made in the same manner as are those of TT couples.
- 4d. Modern husbands will report decisions are made in the same manner as are those of MM couples.

The procedures and tools used to test these hypotheses will be outlined in the research methodology section, that follows.

Chapter 3

Research Methodology

Research Design

Data for this thesis were taken from a larger study (Family Finance Study - Madill and Woolley, 1995) designed to examine the financial management practices of husbands and wives in Canadian households. Data were gathered in 1995 from 300 households with 300 husband and wife partners each reporting on the purchasing and decision making of a durable product valued between \$100.00-\$400.00. Both partners also responded to questions about the roles men and women assume both inside and outside the home.

Sampling Methodology

The sample was selected using the telephone directory in a major Canadian city. Households were telephoned and qualified for the study. In order to take part in the study, each household had to have at least one child 18 years or younger currently residing in their home. In addition, the couple had to be willing to participate in a personal in-home interview lasting approximately one and a half to two hours. Cash incentives of \$25.00 were offered to each household for their participation. Interviews were scheduled at the convenience of the participants and a letter confirming the purpose of the study and the time of the interview was sent to assure participants of the legitimate and academic nature of the research on this very sensitive topic.

Data Collection Instruments

In each household, a trained interviewer conducted:

- i) a joint interview with both male and female partners, and
- ii) individual interviews with the husband and wife separately and privately.

While the individual interview was being conducted, the other partner completed:

- iii) a self-completion questionnaire.

For the purpose of this study, data collected regarding sex roles, relative influence in consumer decision making and demographics was used. The following sections outline the data collection instruments used to gather information on husbands' and wives' sex role orientation and relative influence in consumer decision making.

Sex Role Questionnaire. Question five of the individual questionnaire was designed to determine the sex role of both male and female partners (i.e. traditional, modern, or some combination). Due to the sensitivity of the topic, careful consideration was necessary as not to offend any respondents. Many of the scales used in previous research were dated, some questions were obsolete and others could have potentially insulted participants. Therefore, after careful analysis the scale used in the British Household Panel Study was chosen to measure sex roles, as shown in Appendix B.

This scale included questions about the family, people's roles and work outside the household. Respondents were asked if they personally agreed or disagreed with the following 9 statements:

1. A pre school child is likely to suffer if his or her mother works.
2. All in all, family life suffers when the woman has a full time job.

3. A woman and her family would all be happier if she goes to work.
4. Both the male and the female partners should contribute to the household income.
5. Having a full time job is the best way for a woman to be an independent person.
6. A man's job is to earn money; a woman's job is to look after the home and family.
7. Children need a father to be as closely involved in their upbringing as the mother.
8. Employers should make special arrangements to help mothers combine jobs and childcare.
9. A single parent can bring up children as well as a couple.

All respondents were asked to rate their level of agreement on a five point scale ranging from strongly agree(1) to strongly disagree(5).

Durable Product- Decision Making Questionnaire. During the joint interview, the husband and wife were asked to identify the last item they purchased (excluding clothes and car repairs) costing between \$100.00 - \$400.00. This item was agreed upon between the couple before proceeding to the individual interview and questionnaire.

Question one (individual questionnaire) of the Madill and Woolley (1995) study asked respondents to describe the decision making undertaken in the purchase of the durable agreed upon in the joint interview. Both husbands and wives were asked to describe the relative influence of the husband and the wife in the 13 steps of the decision-making process regarding the purchase of the durable. The thirteen steps were:

1. First brought up the idea to buy.
2. Decided whether you could afford it.
3. Decided how much to spend.

4. Decided on the style.
5. Decided where to buy.
6. Chose special features.
7. Chose brand to buy.
8. Asked friends about product.
9. Collected information about product.
10. Checked consumer magazines.
11. Visited stores.
12. Made final decision.
13. Purchased the item.

Respondents were asked who was involved in each activity when they (respondent and spouse) were purchasing the product identified. Possible responses included: male partner only, male partner more than female partner, both equally, female partner more than male partner, female partner only and nobody, as shown in Appendix C.

In past research related to the decision-making process, the process consisted of only 3 steps: problem recognition; internal and external search; and final decision. In the case of the Madill and Woolley (1995) study, other steps were included to obtain additional information to meet the objectives of the research.

Therefore, for the purpose of this study, a 3 step decision-making process was used for analysis. Steps 1 (first brought up the idea), 8 (asked friends about the product), 9 (collected information from ads about the product), and 12 (made the final decision to

purchase the product) were used to represent problem recognition (step 1), internal and external search (step 8 and 9) and final decision (step 12), respectively. Considering the three crucial steps of the decision-making process makes it easier to compare results with existing studies.

In addition, individual relative influence responses were condensed from six response possibilities to four. Male partner only and male partner more than female partner were grouped together and female partner only and female partner more than male partner were grouped together. As in other studies (Green & Cunningham, 1975; Qualls, 1981; Webster, 1995) the three response groupings will include: husband dominant (HD), wife dominant (WD), and joint (J), plus a fourth response possibility which is unique to this study, nobody (N).

Data Analysis

It was the intent of thesis to begin by classifying each couple into one of four possible sex role categories: TT, MM, MT or TM. Following the generation of a scatter plot graph, as shown in Appendix D, with female sex role scores on one axis and male sex role scores on the other, it was evident that it would not be prudent to classify each couple in such mutually exclusive categories. Examining the frequencies showed that husbands' and wives' sex roles are no longer easily classified as modern or traditional. It was found that many of the respondents' scores were in the middle of the spectrum, instead of at either extreme, as in past research. It was therefore not in the best interest of research to arbitrarily create limits by which to categorize each couple. Sex role scores were therefore entered into the analysis as independent variables.

A review of the background literature showed the potential impact of product type on research results. Results may be product specific and therefore cannot be generalized across all product categories. It was therefore important to address this issue when analyzing the data. The products selected by respondents were therefore classified into one of the following three categorizations: Group 1 - Kitchen Appliance/Furniture & Indoor Maintenance (e.g. microwaves, dishwashers, sofas, vacuum cleaners); Group 2 - Entertainment & Electronics (e.g. televisions, VCRs, stereo equipment, computer hardware and software); and Group 3 - Outdoor Maintenance & Equipment (e.g. lawnmowers, snow blowers, BBQs, tents, canoes, sporting equipment).

To test the outlined hypotheses, logistic regression analysis was used. Logistic regression, for those readers who are not familiar with the process, is useful for situations in which you want to be able to predict the presence or absence of a characteristic or outcome based on values of a set of predictor variables. It is similar to a linear regression model but is suited to models where the dependent variable is dichotomous. In addition, logistic regression coefficients can be used to estimate odds ratios for each of the independent variables in the model. Based on this value, a basic analysis is possible to provide an initial understanding of the effect of the variables in the model.

Hypotheses 1 and 2. To address the hypothesized relationship between a couple's SRO and their agreement on relative roles in decision making, an agree/disagree variable was created for each of the four steps of the decision-making process by individually comparing husbands' and wives' relative influence responses. If husbands' and wives' agreed, the couple was assigned a value of one, if their responses did not

correspond, the couple was assigned a zero value. Separate logistic regression analyses were performed at each of the four steps of the decision-making process using the corresponding dichotomous outcome variable (0=disagree, 1=agree).

Initially, covariates such as sex role variables (SexH, SexW - husband and wife sex role scores; Diff - the difference between a wife and husband's sex role score; Diff^2 , $|\text{Diff}|$ - the square and absolute value of the difference), age variables (AgeH, AgeW), school variables representing the amount of school a husband and wife have completed (SchoolH, SchoolW) and income variables (IncomeH, IncomeW - husband and wife income; Family - family income; IncomeW/H - wife's income as a proportion of husband's income, DiffInc - difference between husband's and wife's income; DiffInc^2 , $|\text{DiffInc}|$ - square and absolute value of the difference) were entered separately to determine their importance. However, both the husband and wife variable of each covariate were entered together for symmetry and comparability to other models. Refer to Appendix E for a full description of variables included in the analysis.

As a preliminary step in developing an appropriate model, each covariate was examined independent of the others. A 10% level of significance was used to test each covariate's p-value. Following this initial test of significance, combinations of variables were tested (combinations were based the initial test of significance, previous research and the outlined hypotheses) to achieve the model with the best fit for each of the four steps of the decision-making process: first brought up the idea to buy, asked friends about the product, collected information from ads about the product and made the final decision. Again, p-values were used to determine the significance of the variables in the

model. A 5% level of significance was used, however, where no significant variables were produced, a 10% level was accepted. Odds ratios were also calculated and interpreted for each significant variable at each step of the decision-making process.

Hypotheses 3 and 4. To address the hypothesized relationship between a couple's SRO, the product being purchased and their relative influence in the decision-making process, as in hypotheses 1 and 2, logistic regression was used. Hypotheses 3 and 4 were analyzed by looking at husbands' and wives' relative influence responses to each of the four steps of the decision making process separately. Multiple logistic regressions were run using wife data. In this case, relative influence response is the dichotomous outcome variable. Four logistic regression analyses were done at each step of the decision-making process using the outcome variables Oxy , where x =the respondent [wife (w) or husband (h)] and y =relative influence response [husband dominant (HD), wife dominant (WD), joint (J), nobody (N)]. That is, when a wife's response is wife dominant (OwWD), a value of one is assigned, while all other responses are given a zero value. This is done for each of the four relative influence response possibilities (i.e. WD, HD, J, and N), at each of the four steps of the decision process. Sex role covariates (SexH, SexW, Diff, |Diff|, Diff²) and product covariates (due to categorical nature of this variable i.e. 1, 2, 3, two dummy variables, D1 and D2, were created to represent the product groups) were used in the analysis. As in the first set of hypotheses, the husband and wife's sex role variables (SexH and SexW) and the product variables (D1 and D2) are entered together for symmetry and comparability to other models. Following the analysis of the wife data, the same process was repeated using the husband's response data. Refer

to Appendix E for a full description of variables included in the analysis.

As in hypotheses 1 and 2, p-values were used to determine the significance of the variables in the model. A 5% level of significance was used, however, where no significant variables were produced, a 10% level was accepted. Finally, odds ratios for each of the significant variables in each logistic regression were calculated and interpreted.

Chapter 4

Research Findings

The research findings section of this thesis will begin with the presentation of the demographic information (income level, age, education and sex role scores) collected via the individual questionnaires. Following the procedures outlined in the Data Analysis section, the research findings will then be presented for the set of hypotheses relating to the proposed relationship between sex role orientation and agreement between spouses on relative roles in decision making. Finally, the results found for the second set of hypotheses (the proposed relationship between SRO, product category and relative influence response) will be outlined.

Sample Description

Upon inspection of respondents' demographic information, it was found that 63.9% of the wives surveyed earn under \$29,999 annually (compared to 34.4% of the husbands), while only 3.1% of wives surveyed earn over \$60,000 annually (compared to 28.4% of husbands), as shown in Table 2.

Table 2 - Respondents Annual Income Level (After Tax)

Income in Canadian Dollars	Husbands	Wives
≤ 29,999	34.4%	63.9%
30,000 - 59,999	37.2%	33%
≥ 60,000	28.4%	3.1%

Over half of the respondents were between the ages of 35 and 54 (67% of the husbands and 56.8% of the wives), while only 2.9% were over the age of 55, as shown in Table 3.

Table 3 - Respondents Age in Years

Age in Years	Men	Women
≤ 34	30.8%	42.5%
35-54	67%	56.8%
≥ 55	2.2%	0.7%

The sample was found to be highly educated. Demographics show 63.2% of male respondents had at least a college education. Similarly, over half the female respondents attained (at least) a college degree (56.4%), as shown in Table 4.

Table 4 - Husband and Wives Education Level

Education	Men	Women
Completed grade school	0.3%	0%
Completed some high school	6.5%	5.7%
Finished high school	14%	19.8%
Completed some college/ university	16%	18.1%
Finished college	16.4%	14.1%
Finished university	26.3%	30.2%
Completed graduate school	20.5%	12.1%

The sample collected in this study is fairly representative of the population in the Ottawa region (city sampled) with the exception that the sample is significantly more highly educated. According to Statistics Canada data, the Ottawa region and its outlying municipalities have a combined population of 1,056,000 inhabitants, with 43.5% of households consisting of three or more people and a regional average per capita income of \$24,000. The Ottawa region boasts one of Canada's most highly educated populations with 32% of its' population being university educated (20% with a degree and 12% without a degree) and 25% holding trade certificates or college diplomas.

Finally, approximately half of the respondents scored between 22 and 31 on the sex role orientation questionnaire, showing the clustering of couples near the middle of the spectrum (as discussed in the data analysis section), as shown in Table 5.

Table 5 - Husbands' and Wives Sex Role Scores - Values between 9 (modern) and 45 (traditional)

Sex Role Score	Husbands	Wives
9-21	32.2%	42.8%
22-31	57.1%	50.5%
32-45	10.7%	6.7%

Sex Role Orientation & Agreement Between Spouses on Relative Roles in Decision Making

Research findings regarding the proposed relationship between sex role orientation and agreement between spouses on relative roles in decision making will be addressed on a step by step basis. Findings will be presented independently for each of

the three steps of the decision-making process: initiates the idea to purchase the product, performs information search (asking friends about the product and collecting information about the product from ads), and makes the final decision to buy. To support hypotheses 1 and 2, findings will require one of the Diff (Diff, |Diff| or Diff²) variables to be significant. A significant Diff variable indicates an increase in the difference between a couple's SR scores (i.e. one spouse is more modern or traditional than the other) results in an increase or decrease in the level of agreement (for the purpose of this study, as the difference between scores increases (i.e. mixed SRO), the level of agreement is expected to decrease). The Diff variable may be a negative or positive value, therefore the value may increase by becoming increasingly more negative or more positive. An increasing negative value indicates the wife is more modern than her husband (or the husband is more traditional than his wife). Conversely, an increasing positive value indicates the wife is more traditional than her husband (or the husband is more modern than his wife). The other two Diff (namely, |Diff| and Diff²) variables will only increase, therefore no indication is provided about who is more modern or traditional.

Following the procedure outlined in the data analysis section, logistic regression analysis was performed to provide the best fitting and most parsimonious model to describe the relationship between the agree/disagree outcome variable and the set of covariates for each step of the decision-making process. For each step, the logit of the multiple regression model is given by the equation $g(x) = B_0 + B_1 x_1 + B_2 x_2 + \dots + B_p x_p$, where $g(x)$ = logit (log of the odds); $x_1, x_2, \dots, x_p$ represent the covariates included in the model; B_0 is the slope coefficient; and $B_1, B_2, \dots, B_p$ represent the logistic coefficients that

correspond to the independent covariates (gives the change in log odds for an increase of one unit in x_p). In addition to the model, odds ratios were computed for each significant variable included in the model, $\psi_{x_p} = \text{odds ratio} = e^{Bp}$. To illustrate the effects of an increase of c units in x_p , the resulting odds ratios were calculated ($\psi_{x_p-c} = e^{Bp \cdot c}$). Therefore, in each of the steps, a model will be provided, as will a list of significant variables, their p-values, level of significance and odds ratios. Refer to Appendix E for a full description of variables included in the following analyses.

Initiates the idea to purchase the product (Step 1). Through logistic regression, it was found the variables representing the amount of schooling completed by both the husband and wife were to be included in the model for step 1 of the decision-making process. The sex role, income and age variables did not prove to be significant. The model is as follows: $g(x) = 0.1470 + 0.1607 \text{ SchoolH} - 0.0914 \text{ SchoolW}$. SchoolH and SchoolW are interval variables which range between 1 and 7, representing: completed grade school (1); completed some high school (2); finished high school (3); completed some college/university (4); finished college (5); finished university (6); and completed graduate school (7). The variable representing the amount of school completed by the husband (SchoolH) is significant at a 10% level with a p-value of 0.0827, however the amount of school completed by the wife (SchoolW) is not significant in and of itself. However, the inclusion of this variable reduces the variability thereby improving the power of SchoolH and improves the fit of the model. The calculated odds ratio is equal to $\psi_{\text{SchoolH}} = e^{0.1607} = 1.174$. With a change of 2 units ($c=2$), the resulting odds ratio is 2.35. Refer to Table 6 for a summary of results.

Upon initial inspection of the data, it was found that 62.3% of the couples agreed (37.7% disagreed) about who first brought up the idea to purchase the product. The logistic regression findings show, the odds of agreement about who initiates the idea to purchase the product increase by 2.35 times for every increase of 2 units of the husband's schooling (i.e. 1 to 3, 2 to 4, 3 to 5, 4 to 6, 5 to 7). A couple's sex role is not significant regarding agreement of who first brought up the idea to buy. These findings do not support hypotheses one or two.

Table 6 - Summary of Results for Hypotheses 1 and 2

Step of DM processes	Variables included in the model	Significant Variables	Level of Sign.(%)	P-value	Odds ratio $\psi=e^{Bp}$	$\psi=e^{Bp \cdot c}$ (Increase X_p by c units)
1	SchoolH, SchoolW	SchoolH	10%	0.0827	1.1174	2.35 ($c=2$)
8	Diff, IncomeW/H	Diff	10%	0.0964	0.9623	0.8249 ($c=5$)
9	Diff	Diff	5%	0.0442	0.938	0.7261 ($c=5$)
12	Diff , Family	Diff	5%	0.041	0.9351	0.7149 ($c=5$)

Information Search - Asks friends about the product (Step 8). Logistic regression analysis produced two variables to be included in the model for step 8 of the decision-making process. A measure of sex role and income were included. The model is as follows: $g(x) = 0.0221 - 0.0385 \text{ Diff} - 0.0499 \text{ IncomeW/H}$. The sex role variable, Diff, is significant at a 10% level of significance with a p-value of 0.0964. The income

variable is not significant in and of itself. however, by reducing the variability it improves the power of the sex role variable and the fit of the model and was therefore included.

The sex role odds ratio is $\psi_{\text{Diff}} = e^{-0.0385} = 0.9623$. With a 5 units ($c=5$) increase in the Diff variable (i.e. as the distance between a couple's sex role scores increase 5 units), the odds ratio is $\psi_{\text{Diff}+5} = e^{-0.0385 \cdot 5} = 0.8249$. Refer to Table 6 for a summary of results.

Comparison of husbands' and wives' (couples) relative influence responses found that 50% of the couples agreed and 50% disagreed about who asked friends about the product. The logistic regression results indicate that as the difference between a couple's sex role scores increase, the odds of agreement between a husband and wife (couple) about who asked friends about the product decrease. This finding supports hypotheses one and two.

Information Search - Collects information from ads about the product

(Step 9). Logistic regression analysis resulted in a model which includes one significant variable, |Diff|, the absolute value of the difference between a couple's sex role scores.

The model for step 9 is $g(x) = 0.1540 - 0.0640 | \text{Diff} |$. The sex role variable is significant at a 5% level of significance, with a p-value of 0.0442 and an odds ratio of $\psi_{|\text{Diff}|} = e^{-0.0640} = 0.9380$. An increase in the absolute difference between a couple's sex role scores (i.e. as the distance between a couple's sex role scores increase) of $c=5$ units, the odds ratio decreases to $\psi_{|\text{Diff}|+5} = e^{-0.0640 \cdot 5} = 0.7261$. Refer to Table 6 for a summary of results.

Review of the data shows, only 46 % of couples agreed (54% disagreed) about who collected information from ads about the product. The odds ratio results indicate, as the absolute difference between a couple's sex role scores increase, the odds of agreement

between a husband and wife (couple) about who collected information from ads about the product decrease. This finding supports hypotheses one and two.

Makes the final decision to purchase the product (Step 12). Logistic regression analysis produced a model containing two variables, the first is a measure of sex role and the second a measure of income. The model for Step 12 of the decision-making process is: $g(x) = 0.8427 - 0.0671|Diff| + 2.86E-06Family$. The sex role variable $|Diff|$ is significant at a 5% level of significance, with a p-value of 0.0410. As in step 8 (asks friends about the product), the income variable is not significant in and of itself, however by reducing the variability it improves the power of the sex role variable and fit of the model and was therefore included. The resulting odds ratio is $\psi_{|Diff|} = e^{-0.0671} = 0.9351$. As the $|Diff|$ variable increases 5 units ($c=5$) (i.e. as the distance between a couple's sex role scores increase 5 points), the odds ratio decreases to $\psi_{|Diff|-5} = e^{-0.0671*5} = 0.7149$. Refer to Table 6 for a summary of results.

Comparison of couples' relative influence responses, resulted in 65.3% of husband and wives agreeing about who made the final decision to buy the product. Step 12 findings show, as the absolute difference value increases (i.e. as the difference between a couple's sex role scores increases), the odds of agreement between a husband and wife (couple) about who made the final decision to buy decrease. As in the information search results, the findings for the final step of the decision-making process support hypotheses one and two.

Sex Role Orientation, Product Category & Relative Influence of Husbands & Wives in the Decision-Making Process

Husband and wife research findings regarding the proposed relationship between a couple's sex role orientation, their relative influence responses and the product group were analyzed and will be presented separately. Findings will be presented by respondent and relative influence response for each of the four steps of the decision-making process. Step#ab will represent the step number (# = 1, 8, 9 or 12), the respondent under consideration [a = husband (h) or wife (w)], and the relative influence response [b = WD (wife dominant), HD (husband dominant), J (joint) and N (nobody)] being analyzed. Step#ab will be the binary outcome variable in each of the logistic regression functions. Coding was done by assigning a value of one to the respondent who answered b to the step being examined, while all other responses were assigned a zero value (e.g. Step1wWD - all wives responding WD to step one were assigned a value of one, while all other responses were given a zero value). This practice was repeated for each Step#ab combination. The covariates for this analysis include: the sex role variables (SexH, SexW, Diff, |Diff|, Diff²) and product variables (due to categorical nature of this variable i.e. 1, 2, 3, two dummy variables, D1 and D2, were created to represent the product groups). To support hypotheses 3 and 4, a significant sex role (i.e. one of the five sex role variables) and product variable is required.

As in the first set of hypotheses, following the procedure outlined in the data analysis section, logistic regression analysis was performed to provide the best fitting and most parsimonious model to describe the relationship between the outcome variable

(Step#ab) and the set of covariates. For both husband and wife data, a model will be presented for each response possibility at each step of the decision making process (i.e. Step1wWD, Step1wHD, Step1wJ, Step1wN, Step1hWD, Step1hHD, Step1hJ, Step1hN, ..., Step12hN). The logit of the multiple regression model is given by the equation $g(x) = B_0 + B_1 x_1 + B_2 x_2 + \dots + B_p x_p$, where $g(x) = \text{logit}(\log \text{ of the odds})$; $x_1, x_2, \dots, x_p$ represent the covariates included in the model; B_0 is the slope coefficient; and $B_1, B_2, \dots, B_p$ represent the logistic coefficients that correspond to the independent covariates (gives the change in log odds for an increase of one unit in x_p). In addition to the model, odds ratios were computed for each significant variable included in the model, $\psi_{x_p} = \text{odds ratio} = e^{B_p}$. To illustrate the effects of a an increase of c units in x_p , the resulting odds ratios were calculated ($\psi_{x_p+c} = e^{B_p \cdot c}$). Therefore, in each of the steps, a model will be provided, as will a list of significant variables, their p-values, level of significance and odds ratios. Refer to Appendix E for a full description of variables included in the following analyses.

Respondents agreed in advance on the product which they would consider to answer the questions at each stage of the decision process. To provide a better understanding of the types of products under consideration, a list of the three product groups (Group 1 - Kitchen Appliances, Furniture & Indoor Maintenance; Group 2 - Entertainment & Electronics; and Group 3 - Outdoor Maintenance & Equipment) and examples of the products respondents provided within each grouping is illustrated in Table 7.

Table 7 - Product Grouping & Product Examples Included in each Group

Group 1 Kitchen Appliances, Furniture & Indoor Maintenance	Group 2 Entertainment & Electronics	Group 3 Outdoor Maintenance & Equipment
Microwaves Dishwashers Vacuum Cleaners Washing Machines Clothes Dryers Groceries Drapery Tables Sofas Beds Lamps	Cameras Televisions VCRs Stereo Equipment Computers (Hardware & Software) Phone Musical Instruments Trip/Vacation Fitness Memberships	Lawnmowers Camping Equipment Snow Blowers BBQs Sporting Equipment Boats (e.g. canoe, kayak) Landscaping Materials Tools Bikes

Analysis of the wives' response data for each of the four steps of the decision-making process will be considered first, followed by an exact repetition of the process using husbands' response data. Research findings for each Step#ab combination will be explained and a summary of results will be provided for each step. Following the presentation of both the wife's and husband's results at each step, a table of both results will be provided for comparison purposes. A written description of Step#ab will be provided for the first step of the process to familiarize the reader with the terminology. Following the first step, the description will be eliminated.

Step 1 - Initiates the idea to purchase the product - Wives' Response Data

Step1wWD. Step1wWD indicates the wife (w) believes she dominants (WD) the first step of the decision-making process, initiates the idea to buy the product

(considering all product groups, a total of 40% of wives responded WD to Step 1). In this case, all wives responding WD to Step 1 were assigned a value of one and the others were assigned a zero value, resulting in the binary outcome variable for the logistic regression.

Logistic regression analysis produced the following model for Step1wWD:

$g(x) = 0.0315 - 0.7170D1 - 1.0331D2 - 0.0537Diff$. Both the product and sex role variables in this model are significant at a 5% level of significance, with p-values equal to 0.0151, 0.0023, and 0.0224 respectively. The odds ratio for each variable is as follows: $\psi_{D1} = 0.4882$; $\psi_{D2} = 0.3559$; $\psi_{Diff} = 0.9477$. As the sex role variable increases 5 units (i.e. as the difference between a couple's sex role scores increases 5 points), the odds ratio decreases to $\psi_{Diff+5} = 0.7645$. Refer to Table 8 for a summary of results.

The D1 odds ratios indicates that the odds of a wife responding WD are 0.4882 times more likely if the product is in group 2 rather than in group 1 (i.e. The odds of the wife responding that she dominates first bringing up the idea to purchase the product are 2.0483 times more likely if the product is in group 1 rather than in group 2). Similarly, the D2 odds ratio indicates, the odds of a wife responding WD are 0.3882 times more likely if the product is in group 3 rather than in group 1 (i.e. The odds of the wife responding WD are 2.8098 times more likely if the product is in group 1 rather than in group 3). The odds ratio for the sex role variable Diff, indicates that as the difference between a couple's sex role score increases (i.e. as the distance between a couples sex role scores increases), the odds of a wife responding that she initiates the idea to buy the product (WD) decrease.

Table 8 - Summary of Results - Wives' Data for Step 1

Step of DM processes	Variables included in model	Significant Variables	Level of Sign. (%)	P-value	Odds Ratio $\psi=e^{Bp}$	$\psi=e^{Bp \cdot c}$ (Increase Xp by c=5 units)
1wWD	D1	D1	5%	0.0151	0.4882	0.7645
	D2	D2	5%	0.0023	0.3559	
	Diff	Diff	5%	0.0224	0.9477	
1wHD	D1	D1	5%	0.0086	2.3553	1.3896
	D2	D2	5%	0.0008	3.1701	
	Diff	Diff	5%	0.0079	1.0680	
1wJ	No significant values found.					

Step1wHD. Step1wHD indicates the wife (w) believes her husband dominates (HD) the first step of the decision-making process (considering all product groups, a total of 33% of the wives responded HD to Step 1). In this case, all wives responding HD to Step 1 were assigned a value of one and the others were assigned a zero value, resulting in the binary outcome variable for the logistic regression.

The model proposed for Step1wHD is: $g(x) = -1.2854 + 0.8567D1 + 1.1537D2 + 0.0658Diff$. Both the product and sex role variables are significant at a 5% level of significance, with p-values of 0.0086, 0.0008 and 0.0079 respectively. The odds ratio for each variable is: $\psi_{D1} = 2.3553$; $\psi_{D2} = 3.1701$; $\psi_{Diff} = 1.0680$. An increase of 5 units results in a sex role odds ratio of $\psi_{Diff+5} = 1.3896$. Refer to Table 8 for a summary of results.

The odds ratios show product group (specifically D2) to have a large impact on a wife's relative influence response about who initiates the idea to buy the product. The

odds ratio for the product variable D1 indicates, the odds of a wife responding her husband dominates first bringing up the idea to buy the product, are 2.3553 times more likely if the product is in group 2 rather than in group 1. The other product variable D2 indicates it is 3.1701 times more likely that a wife responds HD to step 1 if the product is in group 3 rather than in group 1. The change in odds ratios for the variable representing sex role, shows that as the difference between a couple's sex role scores increase, the odds of a wife responding that first brought up the idea to buy the product (step 1) is husband dominant (HD), increase.

Step1wJ. Step1wJ indicates the wife (w) believes first brought up the idea to buy the product is a joint (J) decision (considering all product groups, a total of 23.3% of wives responded J to Step 1). In this case, all wives responding J to Step 1 were assigned a value of one and the others were assigned a zero value, resulting in the binary outcome variable for the logistic regression.

Logistic regression analysis produced no significant results for Step1wJ.

Step1wN. Step1wN indicates the wife (w) believes nobody (N) first brought up the idea to buy the product (considering all product groups, a total of 1.3% of wives responded N to Step 1). In this case, all wives responding J to Step 1 were assigned a value of one and the others were assigned a zero value, resulting in the binary outcome variable for the logistic regression. If this were the case, and neither the husband nor the wife brought up the idea to buy the product, then analysis of the process would be redundant. Therefore analysis of nobody as a possible response for step 1 was not considered.

Step 1 - Initiates the idea to purchase the product - Husbands' Response Data

Step1hWD. Step1hWD indicates the husband (h) believes his wife dominates (WD) the first step of the decision-making process, initiates the idea to buy the product (considering all product groups, a total of 42.7% of husbands responded WD to Step 1). In this case, all husbands responding WD to Step 1 were assigned a value of one and the others were assigned a zero value, resulting in the binary outcome variable for the logistic regression.

Logistic regression analysis resulted in the following model: $g(x) = 0.1072 - 0.4140D1 - 1.0033D2$. Only D2 was found to be significant at a 5% level, with a p-value of 0.0021 (for symmetry and comparability to other models, D1 and D2 are included together). Sex role variables were not found to be significant in this case. The odds ratio for the product variable D2 is $\psi_{D2} = 0.3667$. Refer to Table 9 for a summary of results.

The D2 odds ratio indicates that the odds of a husband responding WD to step 1 are 0.3667 times more likely when the product is in group 3 rather than in group 1 (i.e. The odds of a husband responding that his wife dominates first bringing up the idea to purchase the product are 2.727 times more likely when the product is in group 1 rather than in group 3).

Table 9 - Summary of Results - Husbands' Data for Step 1

Step of DM processes	Variables included in model	Significant Variables	Level of Sign. (%)	P-value	Odds Ratio $\psi=e^{Bp}$
1hWD	D1 D2	D2	5%	0.002	0.3667
1hHD	D1 D2	D1 D2	5% 5%	0.0246 0.0011	2.1400 3.1400
1hJ	No significant values found.				

Step1hHD. Step1hHD indicates the husband (h) believes he dominates (HD) the first step of the decision-making process (considering all product groups, a total of 27.3% of husbands responded HD to Step 1). In this case, all husbands responding HD to Step 1 were assigned a value of one and the others were assigned a zero value, resulting in the binary outcome variable for the logistic regression.

The following model is proposed for Step1hHD: $g(x) = -1.5880 + 0.7613D1 + 1.1462D2$. Both product variables are significant at a 5% level of significance, with p-values of 0.246 and 0.0011 respectively. Again, as in Step1hWD, the sex role variable are not significant. The product variable odds ratios are: $\psi_{D1} = 2.14$; $\psi_{D2} = 3.14$. Refer to Table 9 for a summary of results.

The odds ratios show product group (specifically D2) to have a large impact on a husband's relative influence response about who initiates the idea to buy the product. The D1 odds ratio results indicate, it is 2.14 times more likely that a husband will respond that he dominates first bringing up the idea to buy the product when the product is in group 2

rather than in group 1. The D2 odds ratio shows it is 3.14 times more likely that a husband will respond HD to step 1 when the product is in group 3 rather than in group 1.

Step1hJ. Step1hJ indicates the husband (h) believes first bringing up the idea to buy the product is a joint (J) decision (considering all product groups, a total of 26.3% of husbands responded J to Step 1). In this case, all husbands responding J to Step 1 were assigned a value of one and the others were assigned a zero value, resulting in the binary outcome variable for the logistic regression.

As in Step1wJ, no significant results were found through logistic regression analysis.

Step1hN. Step1hN indicates the husband (h) believes nobody (N) first brought up the idea to buy the product (considering all product groups, a total of 1.7% of husbands responded N to Step 1). In this case, all husbands responding J to Step 1 were assigned a value of one and the others were assigned a zero value, resulting in the binary outcome variable for the logistic regression. If this were the case, and neither the husband nor the wife first brought up the idea to buy the product, then analysis of the process would be redundant. Therefore analysis of nobody as a possible response for step 1 was not considered.

To provide a visual comparison of the wives' and husbands' findings for step 1 of the decision-making process, Table 10 indicates the variables included in each model, the significant variables in each model, their respective significance levels, and odds ratios.

Table 10 - Comparison of Models for Step 1

	1wWD	1hWD	1wHD	1hHD	1wJ	1hJ
% of Responses	40%	42.7%	33%	27.3%	23.3%	26.3%
Variables included in model	D1 D2 Diff	D1 D2	D1 D2 Diff	D1 D2	No Significant Values	No Significant Values
Significant variables	D1 D2 Diff	D2	D1 D2 Diff	D1 D2		
Level of Significance	5% 5% 5%	5%	5% 5% 5%	5% 5%		
Odds Ratio $\psi=e^{Bp}$	0.4882 0.3559 0.9477	0.3667	2.3553 3.1701 1.0680	2.1400 3.1400		

Step 8 - Asks friends about the product - Wives' Response Data

Step8wWD. In this study, a total of 14.3% of wives responded WD to Step 8 (for all product groups). The logistic regression model for Step8wWD is: $g(x) = -1.8370 - 0.0556\text{Diff}$. The sex role variable Diff is significant at a 10% level, with a p-value 0.0601. The product group is not significant for step8wWD. The sex role variable odds ratio is $\psi_{\text{Diff}} = 0.9460$. When the difference between a couple's sex role scores increase by 5 units ($c=5$), the resulting odds ratio is $\psi_{\text{Diff}+5} = 1.3205$. Refer to Table 11 for a summary of results.

These findings show that as the difference between a couple's sex role scores increases, the odds of a wife responding that she dominates asking friends about the product, increase.

Table 11 - Summary of Results - Wives' Data for Step 8

Step of DM processes	Variables included in model	Significant Variables	Level of Sign. (%)	P-value	Odds Ratio $\psi=e^{Bp}$	$\psi=e^{Bp \cdot c}$ (Increase Xp by c=5 units)
8wWD	Diff	Diff	10%	0.0601	0.946	1.3205
8wHD	D1 D2	D1 D2	5% 5%	0.0065 0.0020	4.3200 5.5059	
8wJ	SexW SexH	SexW	5%	0.002	1.1138	1.714
8wN	D1 D2	D1	10%	0.0799	0.6024	

Step8wHD. In this study, a total of 12% of wives responded HD to Step 8 (for all product groups). The logistic regression model for Step8wHD is: $g(x) = -3.0727 + 1.4633D1 + 1.7058D2$. Both product variables (D1 and D2) are significant at a 5 % level, with p-values of 0.0065 and 0.0020 respectively. Their odds ratios are: $\psi_{D1} = 4.3200$; $\psi_{D2} = 5.5059$. Refer to Table 11 for a summary of results. Sex role is found not to be significant for Step8wHD.

The odds ratios show product group to have a large impact on a wife's relative influence response about who asks friends about the product. The D1 odds ratio indicates that it is 4.3200 times more likely that a wife will respond that her husband dominates

(HD) asking friends about the product when the product is in group 2 rather than in group

1. Similarly, it is 5.5059 times more likely that a wife will respond HD to step 8 when the product is in group 3 rather than in group 1.

Step8wJ. Considering all product groups, a total of 14.3% of wives in this study responded J to Step 8. The following model is proposed for Step8wJ: $g(x) = -4.5924 + 0.1078\text{SexW} + 0.0104\text{SexH}$. The wife's sex role is significant at a 5% level, with a p-value of 0.0023. The husband's sex role is not significant in and of itself, however it does improve the power of the wife's sex role by reducing the variability, and for symmetry and comparability to other models, the two variables are included together. The odds ratio for the wife's sex role is $\psi_{\text{SexW}} = 1.1138$. As the wife's sex role score increases by 5 points, the odds ratio equals $\psi_{\text{SexW}-5} = 1.714$. Refer to Table 11 for a summary of results. The product grouping is not significant for Step8wJ.

The sex role odds ratio indicates that as a wife's sex role score increases (i.e. approaches traditional), the odds of her responding that jointly (J), she and her husband ask friends about the product, increase.

Step8wN. In this study, a total of 55% of wives responded N to Step 8 (for all product groups). Logistic regression analysis resulted in the following model for Step8wN: $g(x) = 0.6404 - 0.5069\text{D1} - 0.4524\text{D2}$. Only D1 shows any significance in this model. It is significant at a 10% level, with a p-value of 0.0799. The product variable odds ratio is $\psi_{\text{D1}} = 0.6024$. Refer to Table 11 for a summary of results. As in Step8wHD, sex role is not a significant indicator for step8wN.

The product grouping variable D1's odds ratio indicates that it is 0.6024 times more likely that a wife will respond N to step 8 when the product is in group 2 rather than in group 1 (i.e. The odds a wife will respond that nobody asks friends about the product are 1.6600 times more likely when the product is in group 1 rather than in group 2).

Step 8 - Asks friends about the product - Husbands' Response Data

Step8hWD. The data shows a total of 16% of husbands responded WD to Step 8 (for all product groups). The model found for Step8hWD through logistic regression analysis is as follows: $g(x) = -2.1402 + 0.1165|Diff|$. The sex role variable $|Diff|$ is significant at a 5% level, with a p-value of 0.0033. The $|Diff|$ variable has an odds ratio of $\psi_{|Diff|} = 1.1235$. An increase of 5 units in the absolute difference between a couple's sex role scores, results in an odds ratio of $\psi_{|Diff|+5} = 1.705$ and an increase of 10 units produces an odd ratio of $\psi_{|Diff|+10} = 3.205$. Refer to Table 12 for a summary of results. The group into which the product is classified does not prove to be significant for step8hWD.

The findings indicate that as the absolute difference between a couple's sex role scores increase, the odds a husband will respond that his wife dominates asking friends about the product, decrease.

Table 12 - Summary of Results - Husbands' Data for Step 8

Step of DM processes	Variables included in model	Significant Variables	Level of Sign. (%)	P-value	Odds Ratio $\psi=e^{Bp}$	$\psi=e^{Bp \cdot c}$ (Increase Xp by c=5 units)
8hWD	Diff	Diff	5%	0.003	1.1235	1.705
8hHD	D1	D1	5%	0.0040	4.2256	
	D2	D2	5%	0.0022	4.8040	
8hJ	D1 D2 Diff	D2	10%	0.0713	2.3476	
8hN	D1	D1	10%	0.0940	0.6018	0.6272
	D2	D2	5%	0.0118	0.4406	
	Diff	Diff	5%	0.0087	0.9109	

Step8hHD. In this study, a total of 14.7% of husbands responded HD to Step 8 (for all product groups). Using logistic regression analysis, the model for Step8hHD is: $g(x) = -2.8186 + 1.4412D1 + 1.5695D2$. Both product category variables are significant at a 5% level of significance, with p-values of 0.0040 and 0.0022 respectively. The odds ratio for each product variable is: $\psi_{D1} = 4.2256$; $\psi_{D2} = 4.8040$. Refer to Table 12 for a summary of results. No measure of sex role is significant for step8hHD.

The odds ratios show product group to have a large impact on a husband's relative influence response about who asks friends about the product. The D1 results indicate that the odds of a husband responding that he dominates asking friends about the product are 4.2256 more likely when the product is in group 2 rather than in group 1. Similarly for

D2, the odds of a husband responding HD to step 8 are 4.8040 more likely when the product is in group 3 rather than in group 1.

Step8hJ. Considering all product groups, a total of 12.3% of the husbands responded J to Step 8. The following model is proposed for step8hJ: $g(x) = -2.1914 + 0.4687D1 + 0.8534D2 - 0.0383|Diff|$. D2 is the only significant variable, at a 10% level of significance, with a p-value of 0.0713. Although the sex role variable is not significant in and of itself, some measure of sex role improves the power of the product variable by reducing variability and improves the fit of the model. The product variable D2's odds ratio is $\psi_{D2} = 2.3476$. Refer to Table 12 for a summary of results.

The results show the odds of a husband responding that both he and his wife jointly (J) ask friends about the product, are 2.3476 times more likely when the product is in group 3 rather than in group 1.

Step8hN. Considering all product groups, a total of 49.7% of the husbands in this study responded N to Step 8. The model for step8hN is: $g(x) = 0.9859 - 0.5078D1 - 0.8196D2 - 0.0933|Diff|$. Both product and sex role variables are significant in this model. D1 is significant at a 10% level, while D2 and $|Diff|$ are significant at a 5% level, with p-values of 0.0940, 0.0118 and 0.0087 respectively. Their odds ratios are as follows: $\psi_{D1} = 0.6018$; $\psi_{D2} = 0.4406$; and $\psi_{|Diff|} = 0.9109$. An increase of 5 units ($c=5$), causes a decrease in the sex role odds ratio to $\psi_{|Diff|+5} = 0.6272$. Refer to Table 12 for a summary of results.

The D1 results indicate that the odds of a husband responding that nobody asks friends about the product are 0.6018 times more likely when the product is in group 2

rather than in group 1 (i.e. The odds of a husband responding N to step 8 are 1.6617 times more likely when the product is in group 1 rather than in group 2). Similarly, the D2 results show the odds of a husband responding N to step8 are 0.4406 times more likely when the product is in group 3 rather than in group 1 (i.e. The odds of a husband responding that nobody asks friends about the product are 2.2696 times more likely when the product is in group 1 rather than in group 3). The sex role results show, as the absolute difference between a couple's sex role scores increase (i.e. as the distance between a couple's sex role score increases), the odds of a husband responding that nobody asks friends about the product decrease.

To provide a visual comparison of the wives and husbands findings for step 8 of the decision-making process, Table 13 indicates the variables included in each model, the significant variables in each model, their respective significance levels, and odds ratios.

Table 13 - Comparison of Models for Step 8

	8wWD	8hWD	8wHD	8hHD	8wJ	8hJ	8wN	8hN
% of Responses	14.3%	16%	12%	14.7%	14.3%	12.3%	55%	49.7%
Variables included in model	Diff	Diff	D1 D2	D1 D2	SexW SexH	D1 D2 Diff	D1 D2	D1 D2 Diff
Significant variables	Diff	Diff	D1 D2	D1 D2	SexW	D2	D1	D1 D2 Diff
Level of Sign.	10%	5%	5% 5%	5% 5%	5%	10%	10%	10% 5% 5%
Odds Ratio $\psi=e^{Bp}$	0.946	1.1235	4.3200 5.5059	4.2256 4.8040	1.1138	2.3476	0.6024	0.6018 0.4406 0.9190

Step 9 - Collects information about the product from ads - Wives' Response Data

Step9wWD. Considering all product groups, a total of 15% of wives responded WD to Step 9. Logistic regression analysis produced no significant results for Step9wWD.

Step9wHD. In this study, a total of 16.7% of the wives responded HD to Step 9 (for all product groups). Logistic regression analysis produced the following model for Step9wHD: $g(x) = -2.6250 + 0.9431D1 + 1.6524D2 + 0.0057Diff^2$. Both sex role and product variables are significant at a 5% level, with p-values of 0.0515, 0.0338 and 0.0002, respectively. The product variables odds ratios amounted to: $\psi_{D1} = 2.5680$; $\psi_{D2} = 5.2196$. The sex role variable had an odds ratio of $\psi_{Diff}^2 = 1.0057$. With a change of

25 units, the odds ratio increased to $\psi_{\text{Diff}^2-25} = 1.1532$. Refer to Table 14 for a summary of results.

The odds ratios show product group (specifically D2) to have a large impact on a wife's relative influence response about who collects information from ads about the product. The product variable results indicate that the odds of a wife responding that her husband dominates the collection of information about the product from ads, are 2.5680 times more likely when the product is in group 2 rather than in group 1. In addition, the odds of a wife responding HD to step 9 are 5.2196 times more likely when the product is in group 3 rather than in group 1. The sex role variable shows that as the squared difference (i.e. as the distance between a couple's sex role scores increase) between a couple's sex role scores increases, the odds of a wife responding that her husband dominates collecting information from ads about the product increase.

Table 14 - Summary of Results - Wives' Data for Step 9

Step of DM processes	Variables included in model	Significant Variables	Level of Sign. (%)	P-value	Odds Ratio $\psi=e^{Bp}$	$\psi=e^{Bp \cdot c}$ (Increase X_p by c units)
9wWD	No significant values found.					
9wHD	D1 D2 Diff ²	D1 D2 Diff ²	5% 5% 5%	0.0515 0.0338 0.0002	2.5680 5.2196 1.0057	1.1532 (c=25)
9wJ	SexW SexH	SexW	10%	0.0864	0.9321	0.7032 (c=5)
9wN	D1 D2	D2	5%	0.0248	0.4898	

Step9wJ. In this study, a total of 10.7% of the wives responded J to Step 9 (for all product groups). The model for Step9wJ is: $g(x) = -1.0384 - 0.0704\text{SexW} + 0.0229\text{SexH}$. The wife's sex role is significant for step9wJ at a 10% level, with a p-value of 0.0864 (SexH is included for symmetry and comparability). The resulting odds ratio is $\psi_{\text{SexW}} = 0.9321$. As the wife's sex role score increases five points, the odds ratio decreases to $\psi_{\text{SexW}-5} = 0.7032$. Refer to Table 14 for a summary of results.

The sex role odds ratio indicates that as the wife's sex role score increases (approaches traditional), the odds of a wife responding that jointly, she and her husband collect information from ads about the product decrease.

Step9wN. In this study, a total of 52% of the wives responded N to Step 9 (for all product groups). Logistic regression analysis produced the following model for Step9wN: $g(x) = 0.5596 - 0.4686D1 - 0.7137D2$. Only the D2 variable was significant in this model. D2 is significant at a 5% level, with a p-value of 0.0248 (again, for symmetry and comparability, D1 and D2 are included together). D2's odds ratio equals $\psi_{D2} = 0.4898$. Refer to Table 14 for a summary of results.

The product odds ratio shows that the odds of a wife responding N to Step 9 are 0.4898 times more likely when the product is in group 3 rather than in group 1 (i.e. The odds of a wife responding that nobody collects information from ads about the product are 2.0416 times more likely if the product is in group 1 rather than group 3).

Step 9 - Collects information about the product from ads -Husbands' Response Data

Step9hWD. The data shows, a total of 17.7% of the husbands responded WD to Step 9 (for all products). As in Step9wWD, logistic regression analysis produced no significant results for Step9hWD.

Step9hHD. In this study, a total of 20% of husbands responded HD to Step 9 (for all products). Logistic regression analysis resulted in the following model for Step9hHD: $g(x) = -2.1785 + 0.8376D1 + 1.0935D2 + 0.0368|Diff|$. The product variables, D1 and D2, are significant at 5% level, with p-values of 0.0280 and 0.0086 respectively. The sex role measure is not significant in and of itself, however its inclusion improves the power of the product variables by reducing the variability and improves the fit of the model. The product odds ratios are: $\psi_{D1} = 2.3954$; $\psi_{D2} = 2.9848$. Refer to Table 15 for a summary of results.

The D1 odds ratio indicates that the odds of a husband responding that he dominates the collection of information from ads about the product are 2.3954 times more likely when the product is in group 2 rather than in group 1. Similarly, the D2 odds ratio shows the odds of a husband responding HD to step 9 are 2.9848 times more likely when the product is in group 3 rather than in group 1.

Table 15 - Summary of Results - Husbands' Data for Step 9

Step of DM processes	Variables included in model	Significant Variables	Level of Sign. (%)	P-value	Odds Ratio $\psi=e^{Bp}$	$\psi=e^{Bp \cdot c}$ (Increase X_p by $c=5$ units)
9hWD	No significant values found.					
9hHD	D1 D2 Diff	D1 D2	5% 5%	0.0280 0.0086	2.3954 2.9848	
9hJ	SexW SexH	SexW	10%	0.0962	1.0149	1.0768
9hN	D1 D2	D2	10%	0.0798	0.566	

Step9hJ. The data shows, a total of 13.3% of the husbands responded J to Step 9 (for all product groups). Step9hJ's model is: $g(x) = -0.6302 + 0.0148\text{SexW} - 0.0615\text{SexH}$. The wife's sex role variable is shown to be significant at a 10% level, with a p-value of 0.0962 (SexH is included for symmetry and comparability). The odds ratio for SexW is $\psi_{\text{SexW}} = 1.0149$. As the wife's sex role score increases 5 points the odds ratio increases to $\psi_{\text{SexW} \cdot 5} = 1.0768$. Refer to Table 15 for a summary of results.

The results indicate, as the wife's sex role increases (approaches traditional), the odds of the husband responding that jointly, he and his wife collect information about the product from ads, increase. The changes in the odds ratio are minimal, therefore it is possible there is no real effect.

Step9hN. In this study, a total of 40.3% of the husbands responded N to Step 9 (for all product groups). The model for Step9hN generated by logistic regression is:

$g(x) = 0.0583 - 0.3868D1 - 0.5691D2$. Only one of the two product variables is significant, D2, at a 10% level, with a p-value of 0.0798. The odds ratio for the product variable is $\psi_{D2} = 0.5660$. Refer to Table 15 for a summary of results.

The results show the odds of a husband responding N to step 9 are 0.5660 times more likely when the product is in group 3 rather than in group 1 (i.e. The odds of a husband responding that nobody collects information from ads about the product are 1.767 times more likely when the product is in group 1 rather than in group 3).

To provide a visual comparison of the wives and husbands findings for step 9 of the decision-making process. Table 16 indicates the variables included in each model, the significant variables in each model, their respective significance levels, and odds ratios.

Table 16 - Comparison of Models for Step 9

	9wWD	9hWD	9wHD	9hHD	9wJ	9hJ	9wN	9hN
% of Responses	15%	17.7%	16.7%	20%	10.7%	13.3%	52%	40.3%
Variables included in model	No sign. values	No sign. values	D1 D2 Diff ²	D1 D2 Diff	SexW SexH	SexW SexH	D1 D2	D1 D2
Significant variables			D1 D2 Diff ²	D1 D2	SexW	SexW	D2	D2
Level of Sign.			5% 5% 5%	5% 5%	10%	10%	5%	10%
Odds Ratio $\psi = e^{Bp}$			2.5680 5.2196 1.0057	2.3954 2.9848	0.9321	1.1049	0.4898	0.566

Step 12 - Makes the final decision to purchase the product - Wives' Response Data

Step12wWD. The data shows, a total of 20.3% of wives responded WD to Step 12 (for all product groups). The model for Step12wWD is: $g(x) = -1.7219 + 0.0770|Diff|$. The sex role variable $|Diff|$ is significant at a 5% level, with a p-value of 0.0380. The odds ratio is $\psi_{Diff} = 1.080$. With an increase of 5 units, the sex role odds ratio increases to $\psi_{Diff+5} = 1.469$. Refer to Table 17 for a summary of results. The product variables are not significant for step12wWD.

The results show that as the difference between a couple's sex role scores increase, the odds of a wife responding that she dominates making the final decision to buy the product, increase.

Table 17 - Summary of Results - Wives' Data for Step 12

Step of DM process	Variables included in model	Significant Variables	Level of Sign. (%)	P-value	Odds Ratio $\psi=e^{Bp}$	$\psi=e^{Bp \cdot c}$ (Increase Xp by c=5 units)
12wWD	Diff	Diff	5%	0.038	1.08	1.469
12wHD	D1	D1	5%	0.0532	1.9607	
	D2	D2	5%	0.0079	2.6149	
	Diff					
12wJ	Diff	Diff	5%	0.004	0.9061	0.61

Step12wHD. In this study, a total of 25.7% of wives responded HD to Step 12 (for all product groups). Logistic regression analysis produced the following model for Step12wHD: $g(x) = -1.5794 + 0.6733D1 + 0.9612D2 + 0.0337Diff$. The product variables, D1 and D2, are both significant at a 5% level, with p-values of 0.0532 and

0.0079, respectively. The sex role variable is not significant in and of itself, however some measure of sex role improves the power of the product variables by reducing the variability and improving the fit of the model. The product variable odds ratios equal: $\psi_{D1} = 1.9607$; $\psi_{D2} = 2.6149$. Refer to Table 17 for a summary of results.

The D1 results show the odds of a wife responding that her husband dominates the final decision to purchase the product are 1.9607 times more likely when the product is in group 2 rather than in group 1. The D2 results show the odds of a wife responding HD to step 12 are 2.6149 times more likely when the product is in group 3 rather than in group 1.

Step12wJ. Considering all product groups, a total of 51% of wives in this study responded J to Step 12. The model for Step12wJ is: $g(x) = 0.5376 - 0.0986|Diff|$. The sex role variable, $|Diff|$, is significant at the 5% level, with a p-value of 0.0036. The product variables are not significant for step12wJ. The odds ratio for this model is $\psi_{Diff} = 0.9061$. An increase of 5 units results in a decrease of the odds ratio to $\psi_{Diff-5} = 0.610$. Refer to Table 17 for a summary of results.

Results show, as the difference between a couple's sex role scores increases, the odds of a wife responding that both her and her husband (jointly) make the final decision to buy the product, decrease.

Step12wN. Step12wN indicates the wife (w) believes nobody (N) made the final decision to buy the product (considering all product groups, a total of 0.7% of wives responded N to Step 12). If this were the case, and neither the husband nor the wife made the final decision to buy, the product was not purchased, making the analysis of the

process redundant. Therefore analysis of nobody as a possible response for step 12 was not considered.

Step 12 - Makes the final decision to purchase the product - Husbands' Response Data

Step12hWD. Considering all product groups, a total of 18.3% of husbands surveyed, responded WD to Step 12. Logistic regression analysis produced the following model for Step12hWD: $g(x) = -0.9605 - 1.1437D1 - 0.4999D2$. Only one of the two product variables is significant, D1, at a 5% level of significance, with a p-value of 0.0039. No measure of sex role is significant for step12hWD. The odds ratio for D1 is $\psi_{D1} = 0.3186$. Refer to Table 18 for a summary of results.

The odds ratio shows product group (D1) to have a large impact on a husband's relative influence response about who makes the final decision to buy the product. Results indicate, the odds of a husband responding WD to step 12 are 0.3186 times more likely when the product is in group 2 rather than in group 1 (i.e. The odds of a husband responding that his wife dominates the final decision to buy the product are 3.139 times more likely when the product is in group 1 rather than in group 2).

Table 18 - Summary of Results - Husbands' Data for Step 12

Step of DM processes	Variables included in model	Significant Variables	Level of Sign. (%)	P-value	Odds Ratio $\psi=e^{Bp}$	$\psi=e^{Bp \cdot c}$ (Increase X_p by $c=50$ units)
12hWD	D1 D2	D1	5%	0.004	0.3186	
12hHD	D1	D1	5%	0.0030	2.9277	1.309
	D2	D2	5%	0.0027	3.1743	
	Diff ²	Diff ²	5%	0.0253	1.0054	
12hJ	D1 D2 Diff ²	Diff ²	5%	0.0447	0.9951	0.7827

Step12hHD. In this study, a total of 24.3% of husbands responded HD to Step 12 (for all product groups). The model for Step12hHD is: $g(x) = -2.0697 + 1.0742D1 + 1.1551D2 + 0.0054Diff^2$. Both the product and sex role variables are significant at a 5% level, with p-values of 0.0030, 0.0027 and 0.0253 respectively. The resulting odds ratios are as follows: $\psi_{D1} = 2.9277$; $\psi_{D2} = 3.1743$; $\psi_{Diff^2} = 1.0054$; and $\psi_{Diff^2-50} = 1.309$. Refer to Table 18 for a summary of results.

The odds ratios show product group to have a large impact on a husband's relative influence response about who makes the final decision to buy the product. The product variable results show the odds of a husband responding that he dominates the final decision to buy the product is 2.9277 times more likely when the product is in group 2 rather than in group 1. The odds of a husband responding HD to step 12 are 3.1743 times more likely when the product is in group 3 rather than in group 1. The sex role results

indicate, as the difference between a couple's sex role scores increases (i.e. as the distance between a husband's and wife's sex role score increases), the odds of a husband responding that he dominates the final decision to buy the product increases.

Step12hJ. Considering all product groups, a total of 55.3% of husbands in this study responded J to Step 12. The model for Step12hJ is: $g(x) = 0.5341 - 0.389D1 - 0.4404D2 - 0.0049Diff^2$. The sex role variable, $Diff^2$, is significant at a 5% level, with a p-value of 0.0447. The product variables are not significant in and of themselves, however by reducing the variability, their inclusion in the model improves the power of the sex role variable and fit of the model. The sex role odds ratio is $\psi_{Diff^2} = 0.9951$, with an increase of 50 units, the odds ratio decreases to $\psi_{Diff^2} = 0.7827$. Refer to Table 18 for a summary of results.

The results indicate, as the difference between a couple's sex role scores increases, the odds of a husband responding that he and his wife jointly made the final decision to buy the product, decrease.

Step12hN. Step12hN indicates the husband (h) believes nobody (N) made the final decision to buy the product (none of the husbands surveyed responded N to Step 12). If this were the case, and neither the husband nor the wife made the final decision to buy, the product was not purchased, making the analysis of the process redundant. Therefore analysis of nobody as a possible response for step 12 was not considered.

To provide a visual comparison of the wives and husbands findings for step 12 of the decision-making process, Table 19 indicates the variables included in each model, the significant variables in each model, their respective significance levels, and odds ratios.

Table 19 - Comparison of Models for Step 12

	12wWD	12hWD	12wHD	12hHD	12wJ	12hJ
% of Responses	20.3%	18.3%	25.7%	24.3%	51%	55.3%
Variables included in model	Diff	D1 D2	D1 D2 Diff	D1 D2 Diff ²	Diff	D1 D2 Diff ²
Significant variables	Diff	D1	D1 D2	D1 D2 Diff ²	Diff	Diff ²
Level of Significance	5%	5%	5% 5%	5% 5% 5%	5%	5%
Odds Ratio $\psi=e^{Bp}$	1.08	0.3186	1.9607 2.6149	2.9277 3.1743 1.0054	0.9061	0.9951

All the results found in this study have been presented in the above section. In the following section, a discussion of these results will be presented.

Chapter 5

Discussion of Findings

The following section will discuss the findings as they relate to each set of hypotheses. In addition, the issues raised in the discussion associated with each set of hypotheses will be condensed and discussed in a summary of the decision-making process as a whole.

Hypotheses 1 and 2

Hypotheses 1 and 2 proposed that couples with similar sex role orientations, will experience a higher level of agreement about relative influence for all three steps of the decision-making process (i.e. initiates the idea, information search and final decision) than will those couples with mixed sex role orientations. The research findings for two of the three steps of the decision-making process support these outlined hypotheses. Specifically, the information search step (i.e. asks friends about the product and collects information from ads about the product) and the final decision step. The results indicated that as the difference between a couple's sex role scores increase, the odds of agreement between the couple decrease, as hypothesized. Therefore, couples with mixed sex roles (i.e. modern wife / traditional husband, or traditional wife / modern husband), experience a greater degree of disagreement when responding to questions about who dominates asking friends about the product (step 8), collecting information from ads (step 9) and making the final decision to buy the product (step 12). Conversely, as the difference between a couple's SR scores decreases (i.e. as they become more similar), the odds of agreement increase, as proposed in hypothesis 1.

Davis (1970) identified the relationship between relative influence and role consensus as a possible cause for disagreement between spouses. The findings outlined above strengthen this argument by showing that the lack of role consensus (i.e. mixed SROs) results in a low degree of agreement between spouses.

Although the information search and final decision steps (steps 8, 9 and 12) support hypotheses 1 and 2, initiating the idea to buy the product (step 1) results do not. Research findings for step 1 of the decision-making process, first brought up the idea to buy the product, show a couple's sex role orientation not to be significant. Therefore, a couple's SRO does not affect the level of agreement between couples for step 1. However, a husband's education level was found to significantly impact a couple's level of agreement. It was found that as the husband becomes more educated, the odds the couple will agree about relative influence for step 1, increase.

Hypotheses 3 and 4

Hypothesis 3 proposes the following for MM couples (Modern wives and Modern husbands):

- 3a. For products which fall into group 1 (kitchen appliances, furniture and indoor maintenance), initiating the idea to buy the product, asking friends about the product, and collecting information from ads about the product are dominated by the wife, while making the final decision to buy is done jointly.
- 3b. For products which fall into groups 2 and 3 (entertainment & electronics and outdoor maintenance and equipment), initiating the idea to buy the product, asking friends about the product, and collecting information from ads about the product are dominated by the husband, with an increasing amount of wife input / participation. The final decision to buy is done jointly.

The following is proposed for TT couples (Traditional wives and Traditional husbands):

- 3c. For products which fall into groups 1, 2 and 3, initiating the idea to buy the product, asking friends about the product, collecting information from ads about the product and making the final decision to buy are dominated by the husband.

Support from the research findings of the proposed outcomes in hypothesis 3, will also support hypothesis 4, as they are dependent on the outcomes in hypothesis 3.

Hypothesis 4 outlines the proposed outcomes for couples with mixed SROs. Hypothesis 4a. and 4b. relate to MT couples (Modern wife / Traditional husband), while hypothesis 4c. And 4d. relate to TM couples (Traditional wife / Modern husband. The hypotheses are as follows:

- 4a. Modern wives will report decisions are made in the same manner as are those of MM couples.
- 4b. Traditional husbands will report decisions are made in the same manner as are those of TT couples.
- 4c. Traditional wives will report decisions are made in the same manner as are those of TT couples.
- 4d. Modern husbands will report decisions are made in the same manner as are those of MM couples.

The findings for hypotheses 3 and 4 will be discussed on a group by group basis.

The decision-making process for products in group 1 (kitchen appliances, furniture & indoor maintenance) will be discussed first, followed by a products in groups 2 and 3 (entertainment & electronics and outdoor maintenance & equipment).

Group 1 Products

Initiates the idea to buy the product (Step 1). Both modern and traditional husbands (sex role had no impact on the response) and modern wives agreed, that first bringing up the idea to buy a product in group 1 (kitchen appliances / furniture and indoor equipment), is dominated by the wife. It was expected that modern husbands and wives would respond wife dominant to step 1 (findings support hypothesis 3a.), however it was also expected that traditional husbands would respond husband dominant to step 1 (hypothesis 3c). This was not the case, the findings show the sex role orientation of the husband not to impact the manner in which the husband responds to step 1 of the decision-making process.

Traditional husbands agreed with modern husbands that it is the wife that dominates step 1, for products in group 1. As hypothesized, traditional wives did not see themselves as dominating the decision, instead they saw their role as minimal. A decrease in wife involvement is a characteristic of a traditional sex role orientation. Individuals who relate to the traditional views of sex roles, generally, see men as the bread winners and decision makers of the family and the women as the nurturers, care givers and home makers. As outlined in hypothesis 3c, traditional wives report husband domination for step 1 of the decision-making process for all three product groups.

Asks friends about the product (Step 8). It was hypothesized (3a) that the wife would dominate step 8 for products in group 1. However, modern and traditional, husbands and wives agreed that nobody asks friends about products in group 1. This could be because of the nature of the products included in the group. It is possible that

these products are purchased more frequently and therefore require less search, or some other type of search or information gathering is performed (e.g. point of sale displays, shopping around).

Collects information from ads about the product (Step 9). As in step 8, modern and traditional, husbands and wives agreed that nobody collects information from ads for products in group 1 (does not support hypothesis 3a).

Makes the final decision to buy the product (Step 12). As hypothesized (3a), findings show modern husbands and wives agree, the wife dominates making the final decision for products in group 1. Although wives dominate the decision, husbands do participate in the final decision to buy, showing the decision to be more joint in nature.

As expected, less joint decision making was undertaken by traditional couples. It was hypothesized that traditional husbands would respond that they dominate step 12 for products in group 1. However, as in step 1, a husband's sex role orientation does not affect his response. Traditional husbands believed their wives dominate the final decision to buy products in group 1, while traditional wives maintain it is the husband who dominates the decision.

Group 2 and Group 3 Products

Initiates the idea to buy the product (Step 1). As hypothesized (3b, 3c), first bringing up the idea to buy a product in group 2 or group 3 (entertainment & electronics or outdoor equipment & maintenance), is dominated by the husband.

Asks friends about the product (Step 8). As hypothesized (3b), modern couples believe the husband dominates asking friends about products in groups 2 and 3, with an

increasing amount of wife input / participation. Conversely, traditional couples (hypothesis 3c), believe the husband dominates step 8 for products in groups 2 and 3, without any input or participation from their wives.

Collects information from ads about the product (Step 9). Modern couples also agree that the husband dominates the collection of information from ads for products in groups 2 and 3, with an increasing amount of wife input / participation. While traditional couples agree the husband dominates step 9 of the decision-making process (as hypothesized in 3c).

Makes the final decision to buy the product (Step 12). Modern couples agree that husbands dominate making the final decision when the product is in group 2 or group 3. As in group 1 products, the other spouse, in this case the wife, participates in the final decision to buy these products, again, showing the decision to be joint rather than dominated by one spouse. Conversely, traditional couples agreed that the husband dominated making the final decision to buy products in groups 2 and 3.

Table 20 outlines the findings found to support hypotheses three and four. The bold text found in the body of the table indicates these finding were not expected, and therefore do not support the hypothesis [i.e. Step 1 (group 1) WD (h), Step 8 & 9 (group 1) N, and Step 12 (group 1) WD (h)].

Table 20 - Summary - Discussion of Findings

Step	Product Group	MM Couples	TT Couples
Initiates the idea to buy the product	1 2 & 3	WD HD	WD (h) HD (w) HD
Asks friends about the product	1 2 & 3	N HD with ↑ WD = J	N HD
Collects info from ads	1 2 & 3	N HD with ↑ WD = J	N HD
Makes final decision to buy	1 2 & 3	WD with ↑ HD = J HD with ↑ WD = J	WD (h) HD (w) HD

Summary. It has been shown, that couples with different sex role orientations experience a higher degree of disagreement (low degree of agreement) about who makes decisions at each step of the decision-making process. Conversely, couples with similar SROs, have a low level of disagreement (high level of agreement). Although this was the case for information search (steps 8 and 9) and final decision (step 12), initiates the idea to buy (step 1) was unique. The SRO of the couple did not affect who first brought up the decision to buy the product. Women have been working for years to increase awareness among both men and women of the importance of women in today's society. As proposed by Brinberg & Schwenk (1985), as husbands become more modern in their sex role orientation, the more likely they are to agree with their wives (less disagreement). As determined by the findings for step 1, as men become more educated, they are also more likely to agree with their wives (less disagreement). One could deduce, a more educated husband indicates a more modern husband.

The manner in which husbands and wives respond to the different steps of the decision-making process is dependent on the sex role orientation to which a husband and wife subscribe (i.e. traditional or modern). Wives with traditional views still look to the husband to make the decisions at each step of the process for every product. Conversely, modern wives expect to be included in every aspect of the decision-making process. They may not dominate the process at every step or for every product, however they do participate in making the decision. Husbands with traditional views of sex roles expect to make all decisions related to the family, with the exception of products in group 1. Although they see themselves as the bread winner and therefore decision maker of the family, traditional and modern husbands view the products in group 1 as wife dominated. Modern husbands believe in a more egalitarian decision environment, therefore look to their wives for participation / input in every aspect of the process and expect (or accept) the wives to dominate the decision-making process for certain products (i.e. group 1).

Traditionally, products have been associated with a gender. As in the studies conducted by Davis and Rigaux (1974), products seem to have stayed relatively the same. Products that were once male dominated, have remained male dominated. However, the findings show there is an increase in the amount of input / participation women have (for modern SROs) in each step of the decision-making process for these male dominated products (movement towards more joint decision making). Products that were traditionally associated with women (i.e. group 1), are still considered women's domain. However findings do show that nobody performs a search function for these products.

As can be seen by the discussion, the decision-making process of traditional couples is quite simple because the roles of each spouse are clearly defined. Conversely, as couples become more modern, their roles become increasingly flexible and as a result their decision-making process becomes more complex (as per Brinberg & Schwenk, 1985).

The findings show the impact of SRO on the decision-making process for the purchase of a durable product. As in previous research, as couples become more modern, husbands relative influence decreases, while the relative influence of wives increases (Webster, 1995). Similarly, the findings also support the conclusions of researchers Schaninger, Buss & Grover (1982). SR modern couples experience less husband dominated decisions and more joint and wife influence. In addition, the research findings of this study agree with results from a study done by Green & Cunningham (1975). For mixed SR couples, husbands with modern wives reported dominating fewer decisions than husbands of traditional wives.

It can be seen that decision-making is still progressing towards an egalitarian decision environment. As time passes, wives are gaining increasing amounts of influence over durable household consumer decisions (all types of products). As concluded by this and previous studies (mentioned above), as couples become more modern, husbands dominate fewer of household decisions, consequently, decisions are increasingly joint in nature.

Chapter 6

Conclusion

The conclusion section will begin by outlining the strengths and limitations of the research, followed by the implications of this research for researchers and managers. Finally, recommendations for future research and final thoughts will be presented.

Strengths and Limitations

Strengths. This research surveyed both husbands and wives of 300 couples. This sample generated a wealth of potentially valuable information, with which conclusions could be drawn with relative certainty and reliability. In addition, this research introduced a measure of SRO into the analysis as an independent variable, instead of classifying couples into one of four sex role categories. Including the SR variable as independent allows the analysis to consider the strength of modernity or traditionality of each respondent. The research also incorporated a measure of SR into the agree/disagree debate. Davis (1970) stated the lack of role consensus as a possible explanation for a high level of disagreement between couples. However, Davis did not incorporate sex roles into his analysis. This research provides backing for his expectations. Finally, this research provided a “nobody” response possibility for respondents when asked who dominated each step of the decision-making process. Therefore, if the step was not undertaken for the purchase of the product, respondents were not forced to choose one of the options given.

Limitations. The data instrument used in this study to collect sex role data was that of the British Household Panel Study. There is not one generally accepted SR scale, therefore direct comparison to other studies is difficult.

Implications for Researchers

The research findings of this study support the work of many researchers (i.e. Webster, 1995; Brinberg & Schwenk, 1985; Schaninger, Buss & Grover, 1982; Davis, 1970). As shown in their work, this study shows the continuing movement of the household decision-making environment towards an egalitarian situation. It also strengthens the importance of SRO in the analysis of household decision making.

Implications for Managers

Those organizations looking to market their products to consumers must be aware of the information outlined in this thesis. It is important to know not only who your customers are, but how to best and most effectively reach them. Understanding who makes the decision in a family is important, but also understanding why this individual is responsible for making the decision is crucial. Understanding the effects of sex role orientation on the household decision-making process for durable product purchases, is one way to gain this knowledge. The sex role orientation of the spouse will affect who makes the decision for each product group. Consequently, they will respond to different stimuli and require different information to make a decision.

The results show that nobody searches for information about products in group 1 through ads or asking friends. It is therefore important to determine the most effective way to reach the decision makers for these products. It is possible that other advertising

media would be more effective, such as point of sale displays or television commercials.

Products in groups 2 and 3 are generally male dominated. However, it is important to remember that many couples are moving towards a more egalitarian decision environment, therefore wives are participating more in decisions relating to these products. Again, consideration of this fact will affect how and to whom, an organization targets. For example, the content of marketing material may be different depending on the sex of the target group. Because women are relatively new to the decision-making process of these products, it makes sense that the advertising would be informative in nature. The medium with which an organization reaches their target will also vary depending on the gender of their target group (e.g. the type of magazines, GQ, Today's Mechanic vs. Modern Women, Home). Managers aware of these issues, allows them to better channel the resources of their organization to reach the consumers they are (or should be) targeting.

Knowing SRO affects who makes household purchase decisions, it is important to also know how to identify traditional versus modern individuals. Based on past research and analysis of current society, traditional men are commonly among the older echelon of individuals (i.e. the older generation). Traditional men are characterized as being occupied first with their careers, thus leaving their wives to run the household. These individuals have a high need for success, power and competition (Mintz and Mahalik, 1996). These individuals can be found in established careers, and most often subscribe to the ideals of the old boys network. In better economic conditions, 'true' traditional women want to identify with their activities at home (as a wife, a mother) and want to

base their husbands activities at work and want less power than he possess (Hochschild, 1989). However many households require both spouses to work, therefore traditional wives will tend to be employed however, their main focus is the home (not career oriented).

Research states that the acceleration of the involvement of women in the paid labour force is probably related to the continuing trend toward more egalitarian sex role attitudes (Thornton, 1989; McBroom, 1987), however men remain more conservative than women on issues of women in the workplace (Thornton, 1989). Younger generations are subject to different socialization, education opportunities, experiences, and situations than their parents and grandparents, and therefore possess a more egalitarian way of thinking (Spence and Hahn, 1997). It is probable that modern men and women are part of the younger generation, specifically individuals currently attending school or relatively new to the work place.

Sex role orientations are often seen as an evolutionary process that follows an individuals life cycle. School age individuals will tend to have a more modern sex role orientation (Spence and Hahn, 1997), while in the early years of marriage, the division of labour within the home may cause a change in SROs as women often take the primary role of the second shift (Hochschild, 1989). During the active parenting years traditional gender role orientations are most rigidly maintained and are characterized by a shift or even a crossover in later life (Blanchard-Fields, Chen, and Herbert, 1997). Although it is difficult to develop mutually exclusive demographic categorizations, based on the

research it is possible to develop a general characterization by which to identify modern and traditional individuals.

Future Research

Possible future research endeavours include the development of a universally accepted measure of sex role orientation. Many of the scales used in past research do not effectively measure the issues of today's society. The development of such a scale would provide comparability among different works.

As an extension to this research, examination of larger dollar value purchases (i.e. cars, homes) would be of interest. Future research should be undertaken to determine the effects of sex role orientation on these larger ticketed items, as well, if any other variables such as age, income, and education prove to have any impact on these purchases.

Conclusion

This study was designed to examine household decision making, more specifically, the relative influence of husbands and wives in the 1990s. Through examination of previous research and analysis of data collected by Madill and Woolley (1995), this goal was attained. The research shows the impact of SRO on the household decision-making process. A couple's SRO affects both the level of agreement between spouses about relative influence, and who dominates the decisions at each step of the decision-making process. Findings show the level of agreement to be higher for couples with similar sex role orientations. Consequently, as the difference between a husband and wife's SRO increases, the odds of agreement about relative influence decrease.

Results also showed the decreasing domination of husbands in the household decision-making arena. As couples become more modern, decisions at each step of the process are increasingly joint, showing the continuing movement of household decision-making towards a more egalitarian decision-making environment.

References

- Albrecht, S., Bahr, M., and Chadwick, J. (1979). Changing Family and Sex Roles: An Assessment of Age Differences. Journal of Marriage and the Family, 41(1), 41-50.
- Asser, Amardeep and Bobinski Jr., G.S. (1991). Financial Decision Making of Babyboomer Couples. Advances in Consumer Research, 18, 657-665.
- Blanchard-Fields, Fredda, Chen, Yiwei, and Herbert, Christine E. (1997). Interrole Conflict as a Function of Life Stage, Gender and Gender-Related Personality. Sex Roles: A Journal of Research, 37(3/4) (August), 155-174.
- Brinberg, David and Schwenk, Nancy (1985). Husband-Wife Decision Making: An Exploratory Study of the Interaction Process. Advances in Consumer Research, 12, 487-491.
- Buss, Christian W. and Schaninger, Charles M. (1983). The Influence of Sex Roles on Family Decision Processes and Outcomes. Advances in Consumer Research, 10, 439-444.
- Cooper, Donald R. and Emory, C. William (1995). Business Research Methods (5th ed.). Irwin.
- Corfman, Kim P. (1989). Measures of Relative Influence in Couples: A Typology and Predictions for Accuracy. Advances in Consumer Research, 16, 659-664.
- Corfman, Kim P. (1991). Perceptions of Relative Influence: Formation and Measurement. Journal of Marketing Research, 28 (May), 125-136.
- Davis, Harry L. (1970). Dimensions of Marital Roles in Consumer Decision Making. Journal of Marketing Research, 7 (May), 168-177.
- Davis, Harry L. and Rigaux, Benny P. (1974). Perception of Marital Roles in Decision Processes. Journal of Consumer Research, 1 (June), 51-61.
- Engel, James F., Blackwell, Roger D. and Miniard, Paul W. (1993). Consumer Behavior (7th ed.). Orlando, Florida: The Dryden Press.
- Ferber, Robert and Lee, L.C. (1974). Husband-Wife Influence in Family Purchasing Behavior. Journal of Consumer Research, 1 (June), 43-50.
- Granbois, D.H., Rosen, D.L. and Acito, F. (1986). A Developmental Study of Family Financial Management Practices. Advances in Consumer Research, 13, 170-174.

References (continued)

- Green, Robert T. and Cunningham, Isabella C.M. (1975). Feminine Role Perception and Family Purchasing Decisions. Journal of Marketing Research, 12 (August), 325-332.
- Greenstein, Theodore N. (1996). Husbands Participation in Domestic Labor: Interactive Effects of Wives' and Husbands' Gender Ideologies. Journal of Marriage and the Family, 58(August), 585-595.
- Hochschild, A. (1989). The Second Shift. New York. New York: Avon Books.
- Hosmer, David W. and Stanley Lemeshow (1989). Applied Logistic Regression. New York, New York: John Wiley & Sons, Inc.
- Kim, Chankon and Lee, Hanjoon (1989). Sex Role Attitudes of Spouses and Task Sharing Behavior. Advances in Consumer Research, 16, 671-678.
- Madill, Judith and Frances Woolley (1995). Family Finance Study. Material obtained directly from authors.
- McBroom, William H. (1987). Longitudinal Change in Sex Role Orientations: Differences Between Men and Women. Sex Roles: A Journal of Research, 16(9/10), 439-452.
- McHale, Susan M. and Crouter, Ann C. (1992). You Can't Always Get What You Want: Incongruence Between Sex Role Attitudes and Family Work Roles and Its Implications for Marriage. Journal of Marriage and the Family, 54 (August), 537-547.
- Mintz, Robert D. and Mahalik, James R. (1996). Gender Role Orientation and Conflict as Predictors of Family Roles for Men. Sex Roles: A Journal of Research, 34(11/12), 805-822.
- Moore-Shay, E.S. and Wilkie, W.L. (1988). Recent Developments in Research on Family Decisions. Advances in Consumer Research, 15, 454-460.
- Olshavsky, Richard W. and Granbois, Donald H. (1979). Consumer Decision Making- Fact or Fiction?. Journal of Consumer Research, 6 (September), 93-100.
- Osmond, Marie Withers and Martin, Patricia Yancey (1975) Sex and Sexism: A Comparison of Male and Female Sex-Role Attitudes. Journal of Marriage and the Family, 37(4)(November), 744-758.

References (continued)

- Qualls, William J. (1981). Changing Sex Roles: Its Impact Upon Family Decision Making. Advances in Consumer Research, 9, 267-270.
- Qualls, William J. (1987). Household Decision Behavior: The Impact of Husbands' and Wives' Sex Role Orientation. Journal of Consumer Research, 14(2) (September), 264-279.
- Rosen, Dennis L. and Granbois, Donald H. (1983). Determinants of Role Structure in Family Financial Management. Journal of Consumer Research, 10 (September), 253-258.
- Scanzoni, John (1977). Changing Sex Roles and Emerging Directions in Family Decision Making. Journal of Consumer Research, 4(3) (December), 185-188.
- Schaninger, Charles M., Buss, W. Christian and Grover, Rajiv (1982). The Effect of Sex Roles on Family Finance Handling and Decision Influence. An Assessment of Marketing Thought and Practice, 1982 Educators' Conference Proceedings Series No. 48, Chicago, Illinois: American Marketing Association, 43-46.
- Spence, Janet T. and Hahn, Eugene D. (1997). The Attitude Toward Women Scale and Attitude Change in College Students. Psychology of Women Quarterly, 21(1) (March), 17-34.
- Statistics Canada: Economic Indicators.
- Sutton, Robert I. and Staw, Barry M. (1995). What Theory is Not. Administrative Science Quarterly, 40(3) (September), 371-384.
- Thornton, Arland (1989). Changing Attitudes Toward Family Issues in the United States. Journal of Marriage and the Family, 51(4), 873-894.
- Tomeh A. (1970). Sex Role Orientation: An Analysis of Structural and Attitudinal Predictions. Journal of Marriage and the Family, 40(2), 341-350.
- Ursic, Michael (1980). Consumer Decision Making- Fact or Fiction? Comment. Journal of Consumer Research, 7(December), 331-334.
- Webster, Cynthia (1995). Determinants of Marital Power in Decision Making. Advances in Consumer Research, 22, 717-722.

References (continued)

Webster, Cynthia and Rice, Samantha (1996). Equity Theory and the Power Structure in a Marital Relationship. Advances in Consumer Research, 23, 491-497.

Weinberg, Charles B. and Winer, Russell S. (1983). Working Wives and Major Family Expenditures: Replication and Extension. Journal of Consumer Research, 10 (September), 259-263.

Zvonkovic, Anisa M., Greaves, Kathleen M., Schmiede, Cynthia J. and Hall, Leslie D. (1996). The Marital Construction of Gender Through Work and Family Decisions: A Qualitative Analysis. Journal of Marriage and the Family, 58 (February), 91-100.

Appendix A - Marital Roles in 25 Decisions - Davis & Rigaux 1974

Appendix B - British Household Panel Study - Sex-Role Questionnaire

Here are some questions about the family, and people's roles and work outside the household. Do you personally agree or disagree

	Strongly Agree		Neither Agree nor Disagree		Strongly Disagree
A pre-school child is likely to suffer if his or her mother works	1	2	3	4	5
All in all, family life suffers when the woman has a full-time job	1	2	3	4	5
A woman and her family would all be happier if she goes to work	1	2	3	4	5
Both the male and the female partners should contribute to the household income	1	2	3	4	5
Having a full-time job is the best way for a woman to be an independent person	1	2	3	4	5
A man's job is to earn money; a woman's job is to look after the home and family	1	2	3	4	5
Children need a father to be as closely involved in their upbringing as the mother	1	2	3	4	5
Employers should make special arrangements to help mothers combine jobs and childcare	1	2	3	4	5
A single parent can bring up children as well as a couple	1	2	3	4	5

Appendix C - Decision-Making Questionnaire

FOR EACH QUESTION, CIRCLE OR TICK ONLY ONE RESPONSE

DECISION MAKING

1. We are interested in the role that you and your spouse/partner each played in the purchase of _____ . Now, when you and your partner were purchasing the product you told us about who was involved in each of the following activities.

	Male Partner Only	Male Partner more than Female Partner	Both equally	Female partner more than Male partner	Female partner only	Nobody
First brought up idea to buy	1	2	3	4	5	6
Decided whether you could afford it	1	2	3	4	5	6
Decided how much to spend	1	2	3	4	5	6
Decided on the style	1	2	3	4	5	6
Decided where to buy	1	2	3	4	5	6
Chose special features	1	2	3	4	5	6
Chose brand to buy	1	2	3	4	5	6
Asked friends about product	1	2	3	4	5	6
Collected information from ads	1	2	3	4	5	6
Checked consumer magazines	1	2	3	4	5	6
Visited stores	1	2	3	4	5	6
Made the final decision	1	2	3	4	5	6
Purchased the item	1	2	3	4	5	6

Appendix D - Scatter Plot Generated with Respondents Sex Role Scores

Appendix E - Description of Variables & Symbols Included in the Analysis

Symbol	Description
SexW	Wife's sex role score. Value between 9 (modern) and 45 (traditional).
SexH	Husband's sex role score. Value between 9 (modern) and 45 (traditional).
Diff	Difference between a couple's sex role scores (SexW - SexH). Value between -36 and 36.
Diff	Absolute value of SexW - SexH.. Value between 0 and 36.
Diff ²	Diff * Diff. Value between 0 and 1296.
SchoolW	Amount of schooling the wife has completed. On an interval scale from 1 (completed grade school) to 7 (completed graduate school).
SchoolH	Amount of schooling the husband has completed. On an interval scale from 1 (completed grade school) to 7 (completed graduate school).
AgeW	Wife's age in years.
AgeH	Husband's age in years.
IncomeW	Wife's income in Canadian dollars.
IncomeH	Husband's income in Canadian dollars.
IncomeW/H	Wife's income as a proportion of her husband's income.
Family	Family income in Canadian dollars.
DiffInc	Difference between a couple's income levels (IncomeH-IncomeW).
DiffInc	Absolute value of IncH-IncW.
DiffInc ²	DiffInc * DiffInc.
D1	Dummy variable representing product category 2.
D2	Dummy variable representing product category 3.
HD	Husband dominates the decision.
WD	Wife dominates the decision.
J	Joint decision.

Symbol	Description
N	Nobody decided.
$g(x)$	Logistic regression logit (log of the odds).
$x_1, x_2, \dots, x_p$	Covariates included in the logistic regression model.
B_0	Slope coefficient of the logistic regression model.
$B_1, B_2, \dots, B_p$	Logistic coefficients that correspond to the independent covariates. (Gives the change in log odds for an increase of one unit in x_p).
Step#ab	# = decision process step number (1, 8, 9, or 12); a = the respondent under consideration [husband (h) or wife (w)]; b = the relative influence response (b = WD, HD, J, or N).
ψ_{x_p}	Odds ratio for covariate $x_p = e^{B_p}$.
ψ_{x_p+c}	Odds ratio for x_p with an increase of c units = $e^{B_p * c}$.

IMAGE EVALUATION TEST TARGET (QA-3)

APPLIED IMAGE, Inc
1653 East Main Street
Rochester, NY 14609 USA
Phone: 716/482-0300
Fax: 716/288-5989

© 1993, Applied Image, Inc., All Rights Reserved