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LETTER FROM THE EDITOR

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REACHING THE TARGET: AN INVESTIGATION OF SALIENT CHANNEL ATTRIBUTES IN CONSUMER CHOICE

Peggy Choong, Niagara University

ABSTRACT

The question of how to reach target consumers is extremely important to sponsors of mutual funds. Today, mutual funds can choose multiple channels to market their mutual funds. Apart from retirement plans and institutional accounts, mutual funds are sold through full service brokers, financial planners, banks, insurance agents, discount brokers as well as through the direct channel. Each channel provides different types and levels of services to the consumer. For example, financial planners provide guidance and advice while discount brokers provide a means of financial transaction and little financial guidance or advice. The finance, search and retail literature provide partial answers to this choice process.

The aim of this paper is to identify salient channel characteristics and their relationship to consumer characteristics and search behavior. A theoretical model is developed and empirical research is conducted to examine these relationships.

INTRODUCTION

The question of how to reach target consumers is one of considerable importance for organizations. Substantial effort is often given to the design and choice of marketing channels which are able to satisfy demand for a product or service as well as to stimulate demand through the many intermediary functions that they perform. Economic value or welfare is created for the consumer through the performance of these functions (Lusch, 1979; Stern & El Ansary, 1988; Hanak, 1992).

When products are marketed through multiple channels the question of how consumers make channel choices becomes more important. How are the consumers in each channel different? What are the salient attributes manufacturers should offer?

The industry chosen to study these issues is the mutual fund industry. More specifically, the study focuses on the mutual fund industry outside of managed retirement and institutional accounts. Several reasons make this an appropriate choice. First, mutual funds have diffused extensively and become part of the American household. It has become one of the fastest growing categories of household financial assets for more than a decade commanding more than $9.3 trillion. More than half of all households own mutual funds compared to less than 6% in 1980. According to the

Investment Company Institute, a trade organization for the United States fund industry, among investors who hold mutual funds outside work retirement plans, about 80% own mutual funds purchased through a channel intermediary, such as financial planners, full service brokers, banks, insurance agents or discount brokers. Over the last twenty five years, the distribution of mutual funds has undergone dramatic changes. Before 1980, most funds were sold through traditional channels such as full service brokers or directly to the consumers. Today, mutual funds can choose multiple channels to market their mutual funds. Apart from retirement plans and institutional accounts, 76% of mutual funds are sold through full service brokers, financial planners, banks and insurance agents, 17% are sold through the direct channel and 7% are sold through discount brokers (Reid and Rea, 2003).

Unquestionably, channels of distribution are an important consideration for funds marketing their shares. The two main reasons that contribute to how crucial distribution channels are in the marketing decision of fund managers relate to the nature of their customers and the remuneration system for fund sponsors. First, studies have shown that consumers after choosing a particular channel tend not to switch. These consumers often purchase other mutual funds through the same channel. Thus, each new customer is viewed as a stream of future cash flows into the fund. Secondly, fund managers are usually remunerated as a percentage of net asset value. The economics of fund manager compensation often results in a flat marginal revenue curve and a downward sloping marginal cost curve. Profit maximization in these situations usually necessitates attracting as many fresh purchases of fund shares as possible so as to increase the total net asset value of the fund net total redemption (Baumol et al., 1990).

Consumers in the mutual fund industry exhibit a diverse set of characteristics. It is important for mutual fund sponsors to choose the appropriate channel intermediary so as to effectively reach their target customers. As such, they need to have a clear understanding of what attributes consumers use when making their choice.

The aim of this study is to identify salient channel attributes deemed important to consumers in their choice process and investigate their relationship to consumer characteristics and search behavior. A theoretical model is first developed and tested with empirical data.

METHODOLOGY

The Fishbein-Rosenberg theories of the expectancy-value model (Fishbein, 1967) and the theories of economic choice by Lancaster (1966) provide a theoretical rationale for the multiattribute modeling of consumer choice. Because of the importance of the income constraint and the trade off with the consumption of goods in other product categories, Rosen's (1974) utility framework is adopted.

The purchase process of mutual funds includes the search for information as well as the performance of necessary administrative tasks to procure and dispose of the mutual fund shares.

Charles Schwab, a large discount brokerage firm has advertisements that claim that they do the "work" so that you don't. Individuals who desire to invest less of their own time to the purchase process would tend to delegate these tasks to be performed by channel intermediaries such as brokers or bankers. Others who prefer to perform these tasks would tend to bypass channel intermediaries and purchase directly from the mutual fund company itself. Consumers, in effect, trade off the cost of their own time and the cost of purchasing services, which are bundled with the explicit product (that is, mutual fund shares) from a channel. Therefore, a time constraint is added.

Assume that the representative consumer k invests d_i proportion of total investment I on channel i. The *total price or cost* of a mutual fund purchase is defined as:

- The share price (for channel i, initial share price is denoted by P_{oi} and final share price at the end of the period by P_{fi}) plus
- The cost imposed by the channel in the form of annual fees (f^a_i), loads (L_i) and fixed fees (F_i). An example of annual fees are the rule 12b-1 fees and of the latter is the fixed fees paid to financial consultants for professional services rendered.

For a clearer exposition, the loads are amortized and combined with the annual fee to form a total variable annual fee of f_i (amortization development is available from author), which will be used throughout the text. Initial share price P_{oi} and the final share price P_{fi} of the mutual fund share are exogenous to the channel and are determined by the stock market.

The consumer has a selection of channels through which to purchase mutual funds. The choice of channel to use is based on his or her desire to invest personal time in the pre-purchase and purchase process. Given that the consumer chooses the channel i through which to purchase his mutual fund, let the initial share price of that mutual fund share be P_{oi}. The consumer is able to obtain X_i number of mutual fund shares. The channel i has characteristics $z_1, z_2.....z_n$. Assume there is a discrete number of channels available, each described by some level of service and some channel cost (f_i , F_i , L_i).

The open-end mutual fund is virtually in unlimited supply because a fund creates new shares for all new moneys entrusted. This feature makes the flow of money into the fund interpretable as a consumer's response to the attributes offered by the channel and fund. Mutual funds are able to select the attributes of their fund and channel. They do this with a knowledge of their costs and mindful of their rival's decisions and consumer response. Thus, let the characteristics or attributes of service in each channel be defined as s_1 s_2,...s_n.

The consumer allocates time, t_1, t_2,.....t_i to search for mutual fund investment products across the various channel. Variable t_i is the time spent searching in channel i. The remainder of the consumer's time is devoted to work. Without loss of generality, leisure is ignored for simplicity of exposition.

Before going further, it is necessary to define the term service as used in this context. Service is a substitute for the own time input of the consumer. Some important services offered by channels are research, advice, guidance, assortment, convenience and diversification. Greater amounts of service (S_i) given by the channel provide information and other time-saving functions that enable the consumer to reduce the time spent searching and purchasing mutual fund investments.

Since a consumer's own time is reduced by the presence of these services, they are thus willing to pay a higher fee (in the form of higher f_i, L_i and F_i) for channels that offer these service levels. In addition, since mutual fund companies cannot provide the service without incurring more operating expenses, they will need to be reimbursed by higher fees to provide these service levels. For the purpose of this exposition, the case of the back end load is considered and combined with the annual charges. Total variable fee is represented by f_i which is expressed as a percentage of the total dollar value of shares. It is not included in the initial share price P_{oi} or final share price P_{fi} which are determined exogenously by the stock market.

The purpose of amortizing all the relevant expenses and returns is to enable us to simplify the process into a one period problem. This is similar to the methodology used by Horsky and Nelson (1992) in which they amortized yearly installments for cars and provided the solution for a single period situation. Thus the following relationship is obtained:

$$
\begin{aligned}
(1) \qquad & \text{Max } U(R_1 x_i \ldots R_n x_i, AOG) \\
& \text{s.t. } [\textstyle\sum(P_{oi} + f_i (s_1 \ldots s_n) P_{fi}) x_i + F_i] + AOG = Y \qquad \text{[Income Constraint]} \\
& \textstyle\sum t_i (s_1 \ldots s_n, x_i) + t_w = T \qquad \text{[Time Constraint]}
\end{aligned}
$$

where AOG refers to all other goods, t_i is the time spent searching and purchasing the mutual fund, t_w is the time spent working, T is total time and Y is individual income. The fees f_i are expressed as a percentage.

The only attributes that succinctly capture the nature of investment goods, such as mutual fund shares, are its risk and return. Therefore, let R_1, R_2.....R_n refer to gross returns on investments in each channel. The measure of risk for a particular asset is simply taken as the standard deviation or variance of this return.

P_{oi}, is the initial share price. It is noteworthy that the initial price, P_{oi} cannot be a function of services because it is determined exogenously by the stock market and is independent of the services performed by the mutual fund organization.

Specifying the form of the utility function

When the consumer is certain about the attribute levels, the utility function described in Equation (1.) measures the consumer's preference and is the objective function which consumers are normally assumed to maximize. However, in the consumer's channel choice decision, consumers

make their decisions with some uncertainty about the true levels of attributes that they will obtain. Essentially, they are unable to know with any certainty the outcome of their choice. The overall value of investments in each channel however can be described by a distribution over its possible values. The uncertainty of the consumer's utility requires that the consumer maximize the expected utility of the overall value of the attributes instead. Assigning the notation V_k as the overall value across channels, the consumer's utility can be described as a function of its overall value, $U_i = f(V_k)$, where V is a function of the returns and is fully defined subsequently.

The expected utility model is adopted to determine how consumers allocate their funds across different channels under conditions of uncertainty. Keeney and Raiffa (1976) showed that when the value function is measurable, if the consumer obeys the Von Neuman-Morgenstern axioms for lotteries and if the utility function exists, the value function V_k should have constant risk aversion. Thus, the utility function may either be linear or negative exponential with respect to V.

Consistent with Horsky and Nelson (1992) and Currim and Sarin (1984), the negative exponential model is adopted. The utility function for the representative consumer k**,** therefore becomes:

(2) $U_k = c\text{-}b\exp[-a_k(V_k)]$ for consumer k, where $a_k > 0$ and $a_k = U''/U'$.

In Equation (2.), U_k is the utility that takes into consideration uncertainty in the value function V_k. The consumer's risk aversion is represented by a_k which is positive and constant. c and b are scaling constants where $b \geq 0$. Without loss of generality and at the same time preserving the utility difference orderings, we set c and b equal to 0 and 1 respectively. If V is normally distributed, the expected utility of the individual for channel i is as follows (Horsky & Nelson 1992):

(3) $E(U_k) = -\exp\{-a_k (E(V_k) - 0.5 a_k \text{Var}(V_k))\}$

Given that the consumer derives utility from the channel, he will choose the channel for which the above equation is greatest. Looking at Equation (3.), we see that $E(U_k)$ is monotonic in $E(V_k) - 0.5 a_k \text{Var}(V_k)$. Therefore, maximizing Equation (3.) is equivalent to maximizing $E(V_k) - 0.5 a_k \text{Var}(V_k)$.

Defining the value function, V

Assuming back-end load, where the entire amount of investment is used to purchase shares, the relationship between initial share price and quantity of shares with the total dollar amount invested in a mutual fund product, can be stated as follows:

(4) $X_i = (d_i I)/P_{oi}$

Equation (4.) simply states that the number of share obtained for the mutual fund product is equal to the amount of money invested in product one divided by the initial price of the shares at the time of purchase. Fees and loads are additional cost to the acquisition of mutual funds.

Defining gross returns on investments in the following manner:

(5) $R_i = (P_{fi} - P_{oi})/P_{oi}$ final share price may be stated as, $P_{fi} = P_{oi}\ (R_i + 1)$.

Initial and final share prices are determined by the market and are exogenous variables. Thus, returns here are simply the pure returns from the stock market without taking into consideration other costs.

The choice decisions of individuals are made with some degree of uncertainty about the final outcome of investments. This is because a mutual fund product attribute namely returns on investment, R_i, is a random variable which makes it impossible for a consumer to know with certainty the outcome of the investment. Expected utilities therefore need to be taken into consideration. The value function V_k is the final income from the investment in channel i and is the total value of the investment plus the value of all other goods, AOG:

(6) $V_k = \sum P_{fi} X_i + AOG$

In equation (6.) the first term on the RHS represents the total end of period wealth from investment and the second term is the value of all other goods. Given equations (4.) and (5.) it is possible to rewrite equation (6.) in terms of total investment I and returns R.

(7) $V_k = \sum[R_i d_i I_k + d_i I_k] + AOG$

From equation (1.), AOG and household income can be defined as follows:

(8) $AOG = Y - (P_{oi} X_i + f_i P_{fi} X_i + F_i)$

(9) Also, $Y = wT - w\sum t_i$

Expected utility y needs to be maximized as follows:

(10) Maximize $\Psi = E(V_k) - 0.5 a_k Var(V_k)$

Substituting the relationship found in equations (7.) and (8.) equation (10.) can be rewritten as follows:

(11) Maximize $\Psi = E[\sum(R_i d_i I_k + d_i I_k) + Y - (P_{oi} X_i + f_i P_{fi} X_i + F_i)] - 0.5a_k Var(V_k)$

Substituting equation (9.) and $P_{fi} = P_{oi}(R_i+1)$ into equation (11.) yields the following equation:

(12) Maximize $\Psi = E[\sum(R_i d_i I_k + d_i I_k) + wT - w\sum t_i - (P_{oi} X_i + f_i P_{oi} X_i(R_i+1) + F_i)] - 0.5a_k Var(V_k)$

Finally, because $P_{oi}X_i = d_i I_k$, equation (12.) becomes:

(13) Maximize $\Psi = E[\sum(R_i d_i I_k + d_i I_k) + wT - w\sum t_i - (d_i I_k + f_i d_i I_k (R_i+1) + F_i)] - 0.5a_k Var(V_k)$

Differentiating equation (13.) with respect to d and setting to zero, the following equation is obtained:

(14) $R_i I_k + I_k - w(\delta t_i / \delta d_i) - I_k - f_i I_k(R_i+1) - 0.5a_k(\delta Var(V_k) / \delta d_i) = 0$

Re-writing equation (14.):

(15) $I_k(R_i - f_i R_i - f_i) - 0.5a_k(\delta Var(V_k) / \delta d_i) = w(\delta t_i / \delta d_i)$ for all i.

The RHS represents the marginal revenues and the LHS is the marginal cost of investing. A corner solution comes about when the LHS lies above the RHS everywhere for all d_i. In this case, returns net of cost for one particular channel dominates for all channels. This may be written as:

(16) $I_k(R_i - f_i R_i - f_i) - 0.5a_k(\delta Var(V_k) / \delta d_i) > w(\delta t_i / \delta d_i)$ for all I.

In most situations, it is posited that an interior solution would prevail. Some insights are discussed in the empirical section.

EMPIRICAL

Two focus groups were conducted in January 2005. Participants in the focus group were individuals who had purchased mutual funds in the last six months. Among other issues, the focus group investigated attributes respondents looked for in selecting their financial service provider, search efforts, information sources and satisfaction. The results of the focus groups were used to

develop the questionnaire. The mail survey was conducted in June 2005. Five thousand questionnaires were distributed to individuals who had bought mutual funds over the last six months.

In this survey, respondents rated a list of service attributes according to their importance ("Please recall the reasons you selected your particular financial service provider. Could you specify how important the following factors are in your selection decision," "1" denotes "Not Important" and "7" denotes "Very Important.").

In order to uncover the underlying service dimensions demanded by consumers in each channel, these attribute ratings are subjected to factor analysis. This is the procedure for summarizing the information ratings on the twenty attributes into a smaller number of dimensions, which can then be identified as the dimensions underlying the respondents' ratings. The analysis determined that there are four factors.

The results of the factor analysis, after applying the varimax rotation procedure are summarized in table 1. Varimax rotation is used because of its assumption of orthogonality between the factors. The factors relate to the service requirements consumers desire.

The first factor relates to the personal service offered by the financial service provider, interpersonal interactions, familiarity as well as the reputation and reliability of the financial service provider. These relate in some way to a belief that a consumer's financial needs will be safely taken care of by the financial service provider. Thus, this dimension is termed *security*.

The second factor relates mainly to not requiring face to face dealings with or financial advice from the financial service provider. It also includes a requirement to have an economical means of communicating with the mutual fund organization. Since these attributes relate to performing financial transactions independently, this dimension is termed *self-service*.

The third factor relates mainly to being able to deal with the provider on a twenty-four hour basis and is labeled *access*.

Finally, the fourth factor relates to the performance of the mutual fund. Therefore, this dimension is termed *performance*.

These are the service characteristics discerned from the importance ratings of the respondents in each channel. In order to evaluate how these dimensions vary with consumer characteristics and search behavior, they are regressed against known consumer characteristics. The consumer characteristics used are:

1. *Wage*: From equation (15.), it is seen that $MR_i = w(\delta t_i / \delta d_i)$, where MR_i is the marginal revenues of investing. Across all channels, it is seen that:

$$W = MR_i/(\delta t_i/\delta d_i) = MR_j/(\delta t_j/\delta d_j) = \ldots\ldots MR_n/(\delta t_n/\delta d_n)$$

When a channel provides a lot of services, $\delta t_i / \delta d_i$ is small. With higher wages,

$\delta t_i / \delta_i$ needs to be smaller. Thus individuals with higher wages tend to spend less time investing and would require more services. The higher the consumer's income, the greater the opportunity cost of time. This implies that the consumer would demand more services.

Table 1: Factor Analysis of Salient Attributes

Attributes	Factor 1	Factor 2	Factor 3	Factor 4
Personal service given by provider	0.72	-0.28	0.08	0.04
Reputation of provider	0.69	-0.03	-0.44	-0.02
Reliability of provider	0.68	-0.01	-0.43	-0.30
Provision of full service	0.66	-0.11	0.02	-0.34
Familiarity with the provider	0.66	-0.21	-0.27	-0.04
Better control over investment	0.65	0.24	0.11	0.17
Convenient transaction	0.64	0.16	0.17	-0.39
Ability of provider to achieve better performance	0.64	0.09	-0.46	0.12
Accurate execution of orders	0.63	0.27	-0.21	-0.22
Adequate variety of funds	0.61	0.30	0.21	0.13
Accurate monthly statements	0.58	0.28	0.11	-0.28
Reputation of fund adviser	0.56	0.05	-0.24	0.48
Availability of other services	0.53	-0.44	0.34	0.04
Easy transfer of funds	0.52	0.47	0.36	0.14
Location of provider	0.51	-0.49	0.28	-0.02
Dealing face to face	0.51	-0.67	0.25	0.13
Telephone service 1-800	0.37	0.63	0.29	-0.06
Quality of financial advice	0.55	-0.59	-0.00	0.17
24 hours access to a representative	0.47	0.21	0.46	0.10
Performance of fund	0.42	0.40	-0.18	0.47
Factor labels	Security	Self-service	Access	Performance

To operationalize this, the variable income is used here as an approximate measure of the opportunity cost of time. Consumers with higher incomes have higher opportunity costs of time and would tend to delegate functions to be performed by channel intermediaries. They would thus place higher importance on obtaining personal service and are less willing to expend their own time to perform tasks required for making investment decisions or transactions. Income is therefore

hypothesized to vary negatively with the dimension of self-service and positively with that of security and access. At the same time, because they trade off the cost of time and effort on their part with the cost of obtaining time saving service from the provider, they are in essence willing to accept a lower return net of fees. Income is hypothesized to vary negatively with performance.
Discretionary income is also used to capture purchase abilities. Respondents were asked to answer the following question:

> "Discretionary income is the amount of money left over after taxes and all necessary expenses (e.g. food, housing, utilities, everyday clothing, basic transportation, and other recurring expenses) have been paid. Among the many uses of discretionary income are dining out, savings and investment, vacations, entertainment and audio and video equipment. What percentage of your annual household income would you estimate is discretionary?"

Consumers with large discretionary incomes would have more opportunities to purchase investments. It is hypothesized that consumers with larger discretionary incomes would place greater emphasis on self service and less on security.

2. *Human capital* (**HK**): refers to human capital conducive to the use of service such as time spent using a particular channel or age, which requires more consumption of service (Patterson, 2007).

$$MR_i/(\delta t_i/\delta d_i) = MR_j/(\delta t_j/\delta d_j)$$

Older consumers will have smaller $\delta t_i/\delta d_i$. They would thus demand channels that offer more service. The presence of such human capital would make an otherwise expensive or inefficient investment optimal for the consumer. It can be said that an increase in human capital increases the productivity of using the channel. This implies that older consumer demand channels that provide them with more service.

This is operationalized as age which captures the notion of human capital. There is evidence that older consumers are more satisfied with their purchase (Furse, Punj & Stewart, 1984, Ratchford, Lee & Sambandam, 1994). The explanations put forward by Ratchford et al (1994) is that human capital built up through years of using a particular product results in the familiar product being perceived as more valuable. The probability of repeat purchase is therefore higher. This suggests that older consumers would tend to repeat using the service of the same financial service provider. Another explanation is that older consumers have lower information processing capacities (Cole & Balasubramaniam, 1993). This suggests that they would search less, since the returns to search

would be less, and therefore would delegate some functions to be performed by financial intermediaries. It is hypothesized that age will vary positively with the dimension that captures the notion of service and familiarity namely the factor labeled security and negatively with the dimension that requires personal input namely self-service.

3. *Search effort:* This is a measure of how much time the consumer spends searching for information about the product class under investigation, in this case mutual funds. An individual who uses his or her own time to find an appropriate mutual fund to purchase, would demand a higher return and favor more time intensive channels. This implies that Individuals who engage in higher amounts of search would demand channel which are more time intensive.

This is operationalized as the time spent searching for information about a product class before purchase, larger amounts of time spent searching for the appropriate mutual funds to purchase would reduce the need to delegate this particular search function to the retailer. This is used as an independent variable. It is hypothesized that higher levels of search effort will result in the need for less personal service and guidance from the financial service provider. Search effort is hypothesized to be positively related to self-service and negatively to security.

4. *Familiarity*: This captures the notion of human capital. Familiarity arising from the repeated use of a channel creates higher perceived value in that channel. In other words, it gives rise to human capital. Individuals who are more familiar with a channel that provides personal service would value that aspect while others familiar with channels that offer little personal service would be accustomed to serving themselves. Thus, this variable is hypothesized to vary positively with security and self service. It is measure in terms of the number of years the individual had been investing.

5. *Knowledge*: This has been recognized in the marketing literature to be multidimensional and related to search (Huneke et.al., 2004; Harrison, 2002; Brucks 1985; Alba and Hutchinson 1987). Two kinds of knowledge are identified. The first is knowledge of investing (K_m) and that refers to the understanding that consumers have of the nature, process and possible outcomes of investing. The second refers to the knowledge that consumers have of the channels they use and this is captured in our human capital term (HK).

Knowledgeable consumers do not need to spend time to invest. Their $\delta t_i / \delta d_i$ is small. They would tend to demand higher returns without having to pay a substantial amount of fees. More time intensive channels are favored. This implies that the greater a consumer's knowledge of investing, the less time spend investing and the higher the demand for time intensive channels.

This is operationalized as a ten-item scale (Sample items are "I understand how mutual funds work," "I understand what I read in the mutual fund prospecturs," Cronbach alpha = 0.90). More knowledge of the product class enables an individual to efficiently perform functions which would be delegated by a less informed consumer to intermediaries in the channel structure. Therefore, more knowledge is associated with the use of shorter channel structures, such as direct purchase from the mutual fund company, or with the absence of sales personnel, such as discount brokers. It is therefore hypothesized that knowledge is negatively related to the dimension security and positively related to the dimensions of self-service, access and performance.

6. *Education*: Education facilitates the individuals ability to collect, process and use external information (Newman & Staelin, 1972; Ratchford & Srinivasan, 1991). These abilities make it easier to understand the purchase process when acquiring mutual funds. More highly educated individuals have lower $\delta t_i / \delta d_i$. They would tend to demand higher returns without having to pay a substantial amount of fees. More time intensive channels are favored. This implies that more educated consumers demand channels that offer less service. It is hypothesized that education would be negatively related to security and positively to self service.

Two exploratory research issues involves the extent to which gender differences and marital status differences exist in terms of influences on the demand for services.

7. *Gender*: Eagly and Wood (1985) posit that the male role has an agentic focus which gives rise to the tendency to be assertive and controlling while the female role has a communal focus which leads to a caring attitude for the welfare of others. Research in social psychology has shown that males tend to be resistant to external influences while females being more communal tend to be more susceptible (Cooper 1979, Eagly and Carly1981, Becker 1986). Thus it is hypothesized that males would tend to demand less amounts of security and females would require less amounts of self service.

8. Marital Status: Gagliano and Hathcote (1994) showed that married individuals tended to require higher amounts of reliability from their service vendor. It is therefore hypothesized that married individuals would require more security, access and performance. They would also be negatively related to self service.

RESULTS AND DISCUSSION OF OLS ANALYSIS

OLS regression analysis was performed to evaluate how the 4 service dimensions vary with consumer characteristics. The results are reported in Table 2.

Table 2: Ordinary Least Squares Results

Dependent Variable is:	**Security**		**Self-Service**		**Access**		**Performance**	
Independent Variables	Beta	T-ratio	Beta	T-ratio	Beta	T-ratio	Beta	T-ratio
Knowledge	-0.02*	-6.04	0.01*	2.32	0.01**	1.83	0.00	1.11
Income	0.08	0.97	0.00	0.01	0.11	1.13	-0.03	-0.34
Familiarity	0.02*	2.56	0.01**	1.67	-0.01	-1.07	-0.01	-1.05
Discretionary Income	-0.85*	-2.37	0.64**	1.78	-0.45	-1.13	-0.24	-0.61
Search Effort	0.00	0.17	-0.00	-0.00	0.00**	1.70	0.00	0.74
Gender	-0.05	-0.52	-0.07	-0.72	0.02	0.18	-0.07	-0.64
Marital	0.07	0.46	-0.04	-0.26	0.06	0.37	0.20	1.16
Age	-0.06	-0.54	-0.05	-0.48	-0.02	-0.17	-0.45	-0.42
Education	-0.14*	-3.77	-0.02	-0.45	-0.07**	-1.72	-0.03	-0.77

Note: * denotes significance at the .05 level
** denotes significance at the .1 level

The results show that knowledge is negatively related to security and positively related to self-service as hypothesized. Both are significant at the 0.05 level. Individuals who possess more knowledge are able to understand the purchase process better and require less personal service from the financial service provider. Being more knowledgeable, they are able to navigate the complex investment process by themselves and do not need the "security" of guidance from the financial service provider. Knowledgeable consumers are also found to be positively related to access at the 0.1 level. This underscores the importance knowledgeable consumers place on being able to monitor and perform transactions in a timely manner.

Education is found to be significantly and negatively related to security as hypothesized. Being more capable of collecting, processing and using information, these individuals find it easier to understand the purchase process. They therefore do not require the security that service and guidance from the financial provider gives.

Familiarity is found to be positively and significantly related to security and self service as hypothesized. Consumers who have gained more familiarity have in essence built up a bank of human capital in a particular activity or provider and would thus place a large emphasis on the benefits it provides. Thus individuals who have built up a store of human capital in a channel

offering the benefit of security would value that benefit while others who have become familiar with channels that are characterized as being more self-service would value this quality that they have become accustomed to.

Discretionary income is found to be negatively related to security and postively related to self-service. Both are significant at the 0.05 and 0.1 level respectively. Discretionary income relates in essence to "excess" income individuals have after all the essential expenses have been paid. Individuals with higher discretionary incomes would tend to be frequent investors. They would probably be more savvy about the investment process and be more skilled at navigating the purchase process. Thus, it seems quite logical that they would tend to be less dependent on the comfort of "security" and be able to perform more "self-service" activities.

Search effort is found to be significant at the 0.1 level and positively related to access. Individuals who perform large quantities of search activities would tend to be extremely interested in investment activities and require that they be able to conveniently reach their financial service providers to monitor and perform financial investments.

Though not significant, it is seen that males require less security and married individuals more. These results are in the direction hypothesized and are quite logical depiction of consumer behavior.

In summary, individuals with greater perceived knowledge would tend to place less emphasis on the dimension of security and more on the factor labeled self service. Familiarity leads to repeated usage of a channel and varies positively with both security and self service. Access is important to individuals who perform extensive search while education enables an individual to rely less on the security of personal services rendered by the provider and more on self service.

Thus, consumers who tend to use channels that provide the service of financial transaction but no guidance and advice tend to be more knowledgeable and expand greater search efforts. They also tend to be familiar with their financial provider and the investment process. Ease of access is important to these consumers. If channels such as discount brokers and direct sales outlets want to increase their market share they need to educate the target consumers. They need to persuade the novice target consumers that investing is not complex and is a task that can be accomplished with ease.

Channels that are characterized as being strong in the dimension of security, such as financial planners and full service brokers, need to continue to improving their relationship with their consumers. Customers who use these channels form familiarity with them and tend to stay.

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REGIONAL INFLUENCES UPON THE SELECTION OF IMPORTED VERSUS DOMESTIC SEAFOOD

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ABSTRACT

Consumers exhibit various characteristics that influence their selections. When comparing domestic available foods to import foods, consumers assert bias and discretion for several reasons. While this study reinforced prior studies, which addressed location and the resulting cultural, societal and economic influences that they have upon consumer choice, it provides a look at two very different groups and their demand for fresh seafood vs. imported seafood.

It can be conclusively shown that the desire to protect the local market and local producers, as well as an appreciation for fresh seafood, is more important to people as they get older, and less important to younger consumers. It is further shown that regional preferences are very similar to those countries which act to protect domestic production.

This study examined preferences for fresh seafood as well as domestic and imported pre-packaged seafood. The results were run through several statistical analyses, and clearly show regional differences in seafood choice and selection.

INTRODUCTION

Consumers exhibit various characteristics that influence their selections. When comparing domestic available foods, consumers assert bias and discretion for several reasons. Verlegh (2007) wrote that consumers often have a positive bias toward products from their own country. Verlegh identified this bias as being driven by at least two distinct motives: consumer ethnocentrism (p. 361), which is economic in nature and reflects the consumer's desire to protect the domestic economy; and, national identification, which is psycho-social in nature (p. 362). Zukin and Maguire (2004) identify consumer's choices regarding consumption as a social, cultural, and economic process of choosing goods, and this process reflects the opportunities and constraints of modernity (p. 173).Fernie, Hahn, Gerhard, Pioch, and Arnold (2006) observed that consumers are inconstant in their decision-making and choices, thus perplexing marketers by buying certain imported products over their domestic competitors while completely rejecting other imported goods. Fernie, Hahn, Gerhard, Pioch, and Arnold found that the push to "Buy Domestic" appears to have greater consumer appeal for some products than for others. They found that research suggests that

consumer preferences for domestic versus imported products are a function of consumer demographic characteristics, level of consumer ethnocentrism, country of origin, and domestic country bias (*citing:* Balabanis and Diamantopoulos, 2004; Good and Huddleston, 1995; Huddleston, Good, and Stoel, 2000; Lantz and Loeb, 1996; Netemeyer, Durvasula, and Lichtenstein, 1991; Nijssen, Douglas, and Bressers, 1999; Orth and Firbasová, 2003; Shimp and Sharma, 1987; Supphellen and Rittenburg, 2001; Watson and Wright, 2000) (p. 688).

This study compares consumer choices of several factors influencing their purchase domestic versus imported seafood. Surveys were performed in the coastal area of Mississippi and in Wisconsin, locations that are more than one thousand miles distant. Since early man made his home along the shores of the Gulf of Mexico, the sea has been a major source of food and recreation, with abundant fresh fish, shrimp and oysters having a major role in the local culinary tradition. It is difficult to escape the influence of fresh seafood upon the local people as they either are engaged in recreational or commercial fishing themselves, or they know someone who is, or they pass the many tailgate seafood vendors as they drive local roads. In contrast, all saltwater seafood in Wisconsin has to be shipped-in. The likelihood of someone's dinner in Wisconsin having some form of saltwater seafood harvested that very day is very rare, as the logistical challenges provide an effective barrier to entrée this being anything but a rare and costly specialty. Frozen seafood, both domestic and imported is available in both markets. Subsequently, consumers in both markets will have similar choices in frozen seafoods but dissimilar options regarding their choices (fresh-caught vs. frozen) and experiential (personal contact with saltwater fishing industry and persons in the industry).

According to the National Oceanic and Atmospheric Administration (NOAA) (2007), "Americans consumed a total of 4.9 billion pounds of seafood in 2006. The nation imports roughly 83 percent of its seafood and remains the third largest global consumer of fish and shellfish, behind Japan and China" (para. 2). Firms at the various levels of the seafood industry benefit from understanding of consumers' attitudes towards foreign products, that can help with the design of more effective product, price, promotion, and distribution strategies (Lawrence, Marr and Prendergast, 1992, p. 37). Americans dinner tables owe their largess not only to American agribusiness, to the food service workers at grocery stories, restaurants and hotels, to immigrant workers, U.S. trade policies, and to international regulatory bodies, (Hoganson, 2006, p.574).

LITERATURE

It is well known that seafood consumption statistics vary according to ethnicity, religion, and region. For example, in a study about consumption, Dellenbarger, Dillard, Schupp, Zapata, and Young (1992) examined perception of regional availability of catfish, writing that a consumer's perception of the availability of catfish influenced a household's consumption of it (p. 39), and

showed that the areas with the highest probability of catfish consumption in the United States were east and west-south central areas, (p. 40).

Factors of Consumer Choice

The perception of availability is reflected in consumer choice changes in western societies after World War II. Rosson (1975) described several factors that caused considerable change in the seafood industry in Great Britain since the war, citing changes in eating habits, increasing incomes, the influx of wives into the workforce, changes in freezing and packaging technologies and in the harvesting of seafood all have changed the industry from production to changes in consumption (p. 232). The market for fresh fish has been impacted by these factors, with the demand for fresh vs. frozen seafood driven by older and those in the high or low income groups (p. 239). The influence of the contemporary preponderance of seafood arriving in markets in prepackaged and processed form has even spawned a selection process within these forms, with the influence of certified seafood lines causing further delineations in consumer choices (Wessells, Johnson, and Donath, 1999).

The influence of age and a desire to live healthier impacts consumer choice. Seafood, when boiled, baked, or grilled is frequently viewed as being part of a healthy diet.

Arndt, Solomon, Kasser, and Sheldon (2004) wrote that it appears that a significant number of people undergo a shift toward such eat-healthy value systems as they confront their mortality through the natural aging process, or with the calamity of experiencing a terminal illness (p. 210).

Subsequently, consumer choices are fluid, influenced by a number of cultural, psycho-social as well as economic factors. The seafood industry is inherently part of this dynamic. There are exceptions to the dominance of frozen seafood in the marketplace interspersed with regional availability of recently-caught refrigerated product. One particular seafood product must be delivered alive. Steinberg (2005) described the great lengths that shippers and carriers go through to deliver live North American lobsters to markets in Europe (primarily France, Spain and Italy), writing that live lobsters cannot survive being bumped off of a departing flight, lobsters will die if they stay behind an extra day (p. 12).

Consumer Choices Based upon Nationality: a Global Phenomena

Shoham, Davidow, Klein, and Ruvio (2006) identify (with the caveat that further research was recommended) dogmatism, nationalism, and internationalism as antecedents of consumer animosity. Their research did not establish that these factors are antecedents to choice as opposed to simply correlates of consumer animosity toward imports (p. 104). This animosity toward imports can influence consumers to purchase domestic products.

The choice for locally produced agricultural products in Germany was studied by Wirthgen (2005), who wrote that regional marketing appears to be a parallel development to the globalization trend (p. 191). The study showed significant preferences for regionally and environment-friendly produced food (p. 198). The choice for wines differed between two Spanish regions with differences in price and region strongly influencing consumer choices (Gill and Mercedes, 1997). Russell and Valenzuela (2005) showed that ethnocentrism is associated with resistance to foreign movies, whereas global openness is positively related to consumption of and desire for watching foreign movies (p. 88).

Bhuian (1997) indicated that within the Saudi marketplace there is a significant difference in the attitudes of consumers, "with regard to products in general and the associated marketing practices of the USA, Japan, Germany, Italy, the UK and France." Bhuian writes that, "Saudi consumers correspondingly seemed to have the most positive attitudinal response to the products and marketing activities of the USA and Japan. Only in the area of central product attributes were Japanese products more favorably perceived than US goods. The relative position of these two countries varies depending on the product or marketing attribute in question."

The countries with a history of socialist and/or communist governments and economies have additional factors that influence consumer choice. Dou, Wang, and Zhou (2006) describe how in China, regional biases and preferences influence consumer behavior, with older generations influenced by turbulent events in their lives. Vann (2005) examined consumer anxieties in Vietnam and Russia, revealing what he calls a shared crisis of 'locality' - a common concern about the movement of goods between spaces designated as "domestic" and as "foreign." However, testing in the two countries appears to indicate different considerations, perhaps tied to their different experience in market reform. These are described as markets still searching for their respective identities, because, "through their consumption practices, shoppers in Vietnam and Russia are reframing socialist and neoliberal notions of self society, and the market" (p. 465). "The purity of food products appears to have great importance in the Russian market, which can be attributed to the negative experiences consumers had with contaminated imported products in the recent past" (p. 701).

In an effort to promote local products, the Russian marketplace shows fluidity and dexterity, using several mechanisms to enhance demand for local products. Caldwell (2002) reported that, "Locally produced elements of Russian cuisine both compete with and imitate foreign food products. In response to perceptions that foreign cultures are displacing or subsuming local cultural forms, Russian officials have launched a 'Buy Russian' campaign. Domestic food producers, store clerks, and customers collaborate to classify foods and other products as either 'Ours' (Nash) or 'Not Ours' (*Ne nash*) and describe local goods as superior to foreign goods in terms of taste, quality, and healthfulness" (p. 295).

Subsequently, it is seen that global consumer activity is found to be influenced by desires to be loyal to the domestic and regional products in the marketplace. This preference or bias is not

limited to foodstuffs, but across the spectrum of products. Also, consumer preferences can surface as an influence by past or present political and cultural activities.

Marketplace Influences in the U.S.

Globalized trade, via NAFTA, CAFTA-DR, MFN declarations, and a myriad of trade agreements with other countries has made virtually every retail outlet in the U.S., places where domestic products compete with imports. The U.S. food industry relies upon a seamless stream of crisp fresh agricultural products available even in the dead of winter. This pits domestic agricultural entities in direct competition with foreign producers.

The seafood marketplace in the U.S. is a virtual battle-zone of competition, with imported and domestic products vying for their shares. Not only must purveyors of frozen seafood compete with fresh-caught seafood (especially in coastal areas), the live-seafood component adds to the spectrum. Domestic producers battle perceived "dumping" by international producers. Dumping is understood to be the selling in a market of a product at a price that is under cost or under the price that it is offered in the seller's home market. An example of such action is found in the records of the U.S. Department of Commerce, International Trade Administration. On January 27, 2004, a "Notice of Initiation of Antidumping Duty Investigations: Certain Frozen and Canned Warmwater Shrimp from Brazil, India, Thailand, the People's Republic of China and the Socialist Republic of Vietnam" was filed, containing allegations of dumping.

The dominance in the U.S. seafood marketplace of relatively inexpensive imported shrimp has influenced the U.S. market, leading to lower prices received by domestic shrimp producers (Condrasky, Vinuya, and Howell, 2005, p. 69). This strong market and product presence has changed how many Americans think about shrimp, with many not having contact with genuinely fresh shrimp that are recently caught. Condrasky, et.al., (2005) describe the present state of the domestic U.S. market for shrimp (p.79). Imports dominate, with almost 90% of the market. This has caused a somewhat unusual side-effect: Most U.S. consumers have developed a taste for IQF shrimp over fresh (p. 79).

The marketplace combat between imports and domestic products in the U.S. is much wider in scope that the seafood industry and some urge consumer revolt, advocating consumers to "buy-American." This is a concept of Americans reaching out to other Americans to construct effective bonds of trust through self-denial, thus influencing the consumer marketplace with their buying power. This kind of movement is a *defacto* new American Revolution may take on new political meanings (Breen, 2006, p. 408). Not all are in favor of this sort of action. Opponents see it as a consumer-driven protectionist move that creates a protectionist marketplace action when government itself does not act to protect local markets. This creates a form of protectionism driven by consumer choice. Opponents of this sort of campaign see it as more sinister than direct political censorship and accordingly an affront to liberty itself, (Delacroix and Bornon, 2005, p. 373).

Hypothesis for Analysis

Considering the foregoing information on both domestic and international markets, the following hypotheses were developed:

Main Hypothesis

H1: There is a statistically significant difference between the responses of Mississippi and Wisconsin.

Sub-Hypotheses

H1a: Older people care more about origin and taste.
H1b: Younger people care more about price.
H1c: National pride issues will be strong in both areas.
H1d: MS will have stronger preference for fresh seafood.
H1e: Coastal MS will have stronger protectionist desires than inland WI

METHODOLOGY

Surveys were distributed as classroom projects to adult learners in the areas of Gulfport, MS (n=321) and Madison, WI (n=200), in July and August 2007. Students were asked to survey approximately 10 people, ages 18 and older. Students were supplied an MS Excel template. All students used identical templates, which provided a uniform method for reporting the results. The survey was about opinions and attitudes regarding seafood consumption and purchasing.

These two states provided a good basis for comparing consumer sentiments. Wisconsin is not connected to the sea and Mississippi is. Seafood consumption in MS is much higher than in WI. In general, people are more opinionated in MS about seafood, and it plays a larger part in their lives. Attitudes are expected to differ and that was borne out in this research. An important part in seafood retailing is the attitude of the consumer with respect to imported seafood. Especially in areas with a strong local seafood industry, like in Mississippi, discussion about quality, taste, safety, and other aspects of imported versus local seafood has been vehement in the local media. This survey shows that the influence that this discussion has had on attitudes of consumers.

Statistical analysis of the data consists of Pearson's correlations, Z_{obs} (source: Pallant (2005), descriptive statistics and the one-way ANOVA.

Measures

The measures used are described in this section and are grouped categorically. The research instrument is provided in Appendix A.

Demographic measures

There are two demographic measures in this study. *Age* was asked in question no. 1. Given that this study was provided by the surveys being conducted in two regions of the United States that are located approximately 1011 miles apart, the two data groups (MS and WI) provided a regional demographic measure.

Nationalism measures

7. When given a choice, I buy domestic seafood instead of imported seafood.
8. I will not buy seafood that is shipped from another country.
9. I am in favor of importing seafood from overseas that competes with our domestic seafood producers.
13. I think it is wrong to sell foreign seafood cheaper than domestic seafood

Dining out measures

11. When dining out, I ask where the seafood comes from that the restaurant is serving
12. If I know that a restaurant is serving imported seafood, I will not order the dish that contains imported seafood

Taste measures

2. I find that imported seafood looks and tastes like domestic seafood.
10. I find imported seafood tastes fresher than domestic seafood

Monetary measures

3. I find that imported seafood is a better bargain than domestic seafood.
14. I buy seafood based upon price, not based upon where it comes from.

Experiential measures:

4. I find that the available variety of imported seafood is similar to the available variety of domestic seafood.
5. I find that imported seafood stores in the freezer as well as domestic seafood.
6. I find that imported seafood packaging looks more appealing than the packaging of domestic seafood.

Table 1: Mississippi Correlations

	1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*
1. Age	1.000													
2. Taste	-0.175	1.000												
3. Expensiveness	-0.215	0.486	1.000											
4. Variety	-0.206	0.437	0.433	1.000										
5. Storage	-0.175	0.360	0.380	0.420	1.000									
6. Packaging	-0.183	0.261	0.248	0.305	0.416	1.000								
7. Choice	0.209	-0.382	-0.234	-0.334	-0.190	-0.127	1.000							
8. Not Buy	0.210	-0.339	-0.264	-0.186	-0.156	-0.161	0.284	1.000						
9. Competition	-0.182	0.374	0.336	0.353	0.281	0.265	-0.386	-0.331	1.000					
10. Taste 2	-0.296	0.485	0.324	0.362	0.275	0.308	-0.430	-0.322	0.533	1.000				
11. Dining	0.128	-0.192	-0.292	-0.134	-0.177	-0.106	0.145	0.323	-0.154	-0.105	1.000			
12. Ordering	0.150	-0.297	-0.329	-0.233	-0.225	-0.235	0.272	0.496	-0.398	-0.349	0.555	1.000		
13. Sell price	0.149	-0.285	-0.216	-0.266	-0.161	-0.129	0.291	0.358	-0.475	-0.323	0.211	0.417	1.000	
14. Buy Price	-0.248	0.407	0.348	0.284	0.232	0.151	-0.297	-0.289	0.446	0.486	-0.146	-0.280	-0.212	1.00

Table 2: Wisconsin Correlations

	1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*
1. Age	1.000													
2. Taste	0.041	1.000												
3. Expensiveness	0.134	0.352	1.000											
4. Variety	0.071	0.159	0.291	1.000										
5. Storage	0.035	0.186	0.193	0.235	1.000									
6. Packaging	0.018	0.097	0.103	0.073	0.175	1.000								
7. Choice	0.091	-0.187	-0.238	0.094	-0.162	-0.099	1.000							
8. Not Buy	0.105	-0.022	-0.124	-0.118	-0.261	0.019	0.309	1.000						
9. Competition	-0.100	0.165	0.234	0.098	0.215	-0.020	-0.271	-0.389	1.000					
10. Taste 2	-0.155	0.007	0.159	0.142	0.038	0.046	-0.316	-0.185	0.277	1.000				
11. Dining	-0.046	-0.031	-0.078	-0.102	-0.088	0.043	0.202	0.377	0.009	-0.016	1.000			
12. Ordering	0.054	0.040	-0.096	-0.072	-0.187	0.080	0.139	0.548	-0.216	-0.054	0.520	1.000		
13. Sell price	0.099	-0.064	-0.112	0.010	-0.057	-0.111	0.215	0.282	-0.344	-0.165	0.096	0.282	1.000	
14. Buy Price	-0.149	0.192	0.181	0.087	0.193	0.059	-0.263	-0.299	0.160	0.243	-0.333	-0.348	-0.186	1.000

CORRELATIONS

Correlations in Tables 1 and 2 were performed using Microsoft Excel. The tables illustrate Pearson *r* correlation coefficients between each pair of variables (Pallant, 2005, p. 125). The strengths of the relationships are shown by the size of the Pearson correlation value *r*. Pallant (2005, p. 126) cites Cohen (1988), suggesting the following guidelines for interpreting *r* values:

r = .10 to .29 or *r* = -.10 to -.29	small correlation
r = .30 to .49 or *r* = -.30 to -.49	medium correlation
r = .50 to 1.0 or *r* = -.50 to -1.0	large correlation

The result from the MS Excel output in Tables 1 and 2 illustrate that the relationships as measured in *r* values were investigated using Pearson correlation coefficients, and that the majority of the results do fall within the guidelines listed above. Preliminary examination of tables 1 and 2 indicate that there is substantive difference between the tables.

TESTING THE MAIN HYPOTHESIS : COMPARING MS CORRELATION TABLE 1 AND WI CORRELATION TABLE 2

Hypothesis (main)

H1: There is a statistically significant difference between the responses of Mississippi and Wisconsin.

Null Hypothesis

H0: There is no statistically significant difference between the responses of Mississippi and Wisconsin.

Pallant (2005) describes the process to find out whether the correlations of two groups are significantly different. This calculation is not performed by SPSS and must be done with a calculator. This test is appropriate because the two groups were obtained from random samples and the two groups of cases are independent; the same people were not tested in Mississippi and in Wisconsin. The r values of the correlation matrices were converted into a standard score, known as a z score (Pallant, 2005, pg. 132). This was done using table 11.1, found on page 133 of Pallant (2005).

Decision Rule

The decision rule is:

If $-1.96 < Z_{obs} < 1.96$: correlation coefficients are not statistically different.
If $Z_{obs} \leq -1.96$ or $Z_{obs} \geq 1.96$: correlation coefficients are statistically different.

Thus, if the Z_{obs} value is between -1.96 and +1.96, then you cannot say that there is a statistically significant difference between the two correlation coefficients, (p.134).

Pallant (2005, p. 134) provides the formula for calculating $Z_{obs:}$

$$Z_{obs} = Z_1 - Z_2 \div \sqrt{\{[1 \div (N_1 - 3)] + [1 \div (N_2 - 3)]\}}$$

Table 3: Z_{obs} Comparing the r values between the MS and WI correlation tables

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Age														
2. Taste	-2.427													
3. Expensiveness	-6.107	1.913												
4. Variety	-3.11	3.411	1.801											
5. Storage	-2.371	2.125	2.327	2.338										
6. Packaging	-2.315	1.913	1.622	2.685	2.964									
7. Choice	1.376	-2.383	6.633	-4.955	-0.347	0.291								
8. Not Buy	1.208	-3.669	4.441	-3.445	1.23	-2.025	0.313							
9. Competition	-0.973	2.539	1.219	2.964	0.783	5.269	-1.45	0.772						
10. Taste 2	-1.655	5.873	1.969	2.64	2.774	3.031	1.499	-1.622	3.524					
11. Dining	1.969	-1.812	-2.45	-0.403	2.987	-1.622	-0.694	-0.761	1.861	-1.009				
12. Ordering	1.074	-3.91	-2.718	-1.835	0.47	-3.568	1.521	-0.837	2.31	-3.475	0.561			
13. Sell price	0.57	-2.55	-1.208	-3.266	-0.174	-0.235	0.906	0.99	1.76	-1.906	1.379	1.794		
14. Buy Price	4.541	2.662	2.729	2.327	0.403	1.13	0.369	0.123	3.554	3.195	5.538	0.863	4.484	

There are 91 *r* values in the correlation matrix for each state. Of the 91 *r* values, 44 of the Z_{obs} were ≤ -1.96 or ≥ 1.96, so for those Z_{obs} the correlation coefficients are statistically different. While a majority of the Z_{obs} values were not significantly different, the influence of the variables upon each other does show that for some, there are significant regional differences. The significance of difference between the Mississippi and Wisconsin measures used in the study indicated that there are regional differences that surface in this study:

Table 4 : Regional Similarities [S], Dissimilarities [D] and S/D Ratios

No.	Measure	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	S/D ratio
2.	Taste	D													3/10
3.	Expensiveness	D	S												6/7
4.	Variety	D	D	S											3/10
5.	Storage	D	D	D	D										2/11
6.	Packaging	D	S	S	D	D									6/7
7.	Choice	S	D	D	D	S	S								10/3
8.	Not Buy	S	D	D	D	S	D	S							9/4
9.	Competition	S	D	S	D	S	D	S	S						7/6
10.	Taste 2	S	D	D	D	D	D	S	S	D					5/8
11.	Dining	D	S	S	S	D	S	S	S	S	S				10/3
12.	Ordering	S	D	D	S	S	D	S	S	D	D	S			8/5
13.	Sell price	S	D	S	D	S	S	S	S	S	S	S	S		11/2
14,	Buy Price	D	D	D	D	S	S	S	S	D	D	D	S	D	5/8

The calculated Z_{obs} in Table 3 indicate that while the majority of values showed similarities between the correlations in Tables 1 and 2, the values were not uniformly distributed. Table 4 shows that insofar as comparing the correlation *r* values via Z_{obs} calculations, there are indeed correlations of measures between MS and WI that had similar *r* values, while others did not. For the purpose of this analysis, we create the following guideline:

If the S/D ratio is 7/6, 8/5, 9/4, 10/3, or 11/2 we consider the values *similar.*
If the SD ratio is 2/11, 3/10, 4/9, 5/8 or 6/7, we consider the values *dissimilar.*

Considering the guideline above, the following responses showed *SIMILAR* characteristics between the correlations for MS shown in Table 1 and the correlations for WI shown in Table 2:

7. Choice
8. Not buy
9. Competition
11. Dining
12. Ordering
13. Sell Price

Considering the guideline above, the following responses showed *DISSIMILAR* characteristics between the correlations for MS shown in Table 1 and the correlations for WI shown in Table 2:

2. Taste
3. Expensiveness
4. Variety
5. Storage
6. Packaging
10. Taste 2
14. Buy price

The relationships are further tested in 3.3 below.

MEANS AND ONE-WAY ANOVA DESCRIPTIVES

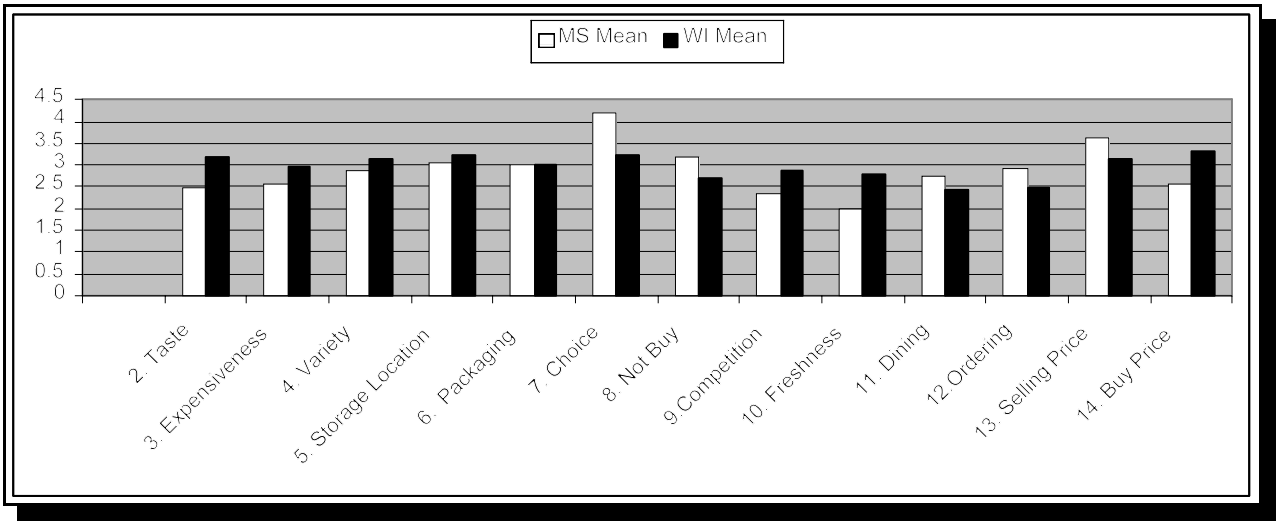
The following table gives an overview of some of the descriptives. Note that some of the questions are formulated as in favor of imports, others as opposed them. Except for age, the scale is a 5 point *Likert* scale, where 5 means "Strongly agree", 4 "Agree", 3 "No opinion", 2 "Disagree", and 1 "Strongly Disagree". All statistical exploration was done with SPSS version 13.0. The ± indicates the standard deviation.

Table 5: MEANS AND ONE-WAY ANOVAS

	Mississippi (n=321)	Wisconsin (n=200)	σ One Way Anova	Means statistically different
1. Mean age of subjects	37.62 ± 14.15	39.34 ± 13.44	0.167	N
2. I find that imported seafood looks and tastes like domestic seafood.	2.48 ± 1.25	3.17 ± 0.97	0.000	Y
3. I find that imported seafood is a better bargain than domestic seafood.	2.59 ± 1.15	2.96 ± 0.86	0.000	Y
4. I find that the available variety of imported seafood is similar to the available variety of domestic seafood.	2.84 ± 1.14	3.13 ± 0.783	0.002	Y
5. I find that imported seafood stores in the freezer as well as domestic seafood.	3.06 ± 1.11	3.22 ± 0.78	0.084	N
6. I find that imported seafood packaging looks more appealing than the packaging of domestic seafood.	3.00 ± 1.05	3.01 ± 0.68	0.875	N
7. When given a choice, I buy domestic seafood instead of imported seafood.	4.18 ± 1.14	3.22 ± 1.00	0.000	Y
8. I will not buy seafood that is shipped from another country.	3.18± 1.34	2.71 ± 1.02	0.000	Y
9. I am in favor of importing seafood from overseas that competes with our domestic seafood producers.	2.33 ± 1.24	2.84 ± 0.99	0.000	Y
10. I find imported seafood tastes fresher than domestic seafood	2.00 ± 1.14	2.76 ± 0.73	0.000	Y
11. When dining out, I ask where the seafood comes from that the restaurant is serving	2.75 ± 1.21	2.43 ± 1.05	0.002	Y

Table 5: MEANS AND ONE-WAY ANOVAS				
	Mississippi (n=321)	Wisconsin (n=200)	σ One Way Anova	Means statistically different
12. If I know that a restaurant is serving imported seafood, I will not order the dish that contains imported seafood	2.89± 1.28	2.46 ± 1.02	0.000	Y
13. I think it is wrong to sell foreign seafood cheaper than domestic seafood	3.60 ± 1.26	3.13 ± 1.08	0.000	Y
14. I buy seafood based upon price, not based upon where it comes from.	2.58 ± 1.35	3.31 ± 1.05	0.000	Y

Figure 1: Bar chart comparison of means, questions 2-14



(With the exception of question 7, about choice, all items pass the Levine test for homogeneity of the variance.)

The interpretation of the findings in Table 5 are discussed below. The numbering used below corresponds to the item numbering in the table:

1. There is no significant difference between the mean age and the distribution of the ages of the subjects in Wisconsin and Mississippi. Any statistically significant difference in answers can therefore be attributed to the culture and the prevailing attitudes of the area where the subjects are living.

2. In Wisconsin, there actually exists, a small preference for the taste of imported seafood: (3.17). In Mississippi the taste of the local seafood is preferred and this preference is more outspoken (2.48). Remember, (3) corresponds with "no opinion."

3. Wisconsin has essentially no opinion if imported seafood is a bargain. In Mississippi people disagree with that statement.

4. In Mississippi the consumers think that local seafood offers a bit more variety, in Wisconsin the consumers think it is the imported seafood that is more varied. However, both opinions are weak and close to "no opinion." It is quite possible that this perception agrees with actual supply in stores and restaurants, and reflects the prominence of prepackaged imported seafood in both markets. A Wisconsin wholesaler will probably buy from whoever is most convenient, in Mississippi the most convenient suppliers includes not only suppliers of imported seafood but also the local seafood industry.

5. Both in Wisconsin and Mississippi people express a weak support for the statement that imported seafood stores well in a freezer, but their answers are close to "no opinion." It is probably something that they never thought about. The answers are not significant different between the two states.

6. With regards to packaging, both states have no opinion about the difference between imports and local seafood. They both answer "no opinion," and there is no statistically different answer between the two states.

7. The subjects in both states express a preference for local seafood, but in Mississippi this preference is much more outspoken (4.18) than it is in Wisconsin (3.22). This is a statistically significant difference, however according to the Levene test the variances are not equal. In general Anova is very robust and in this case σ is very low, so the difference is considered significant. We did not apply other statistical tests to this item, although that in principle would be possible. See also below, where this is broken down by age group.

8. In Mississippi the average customer states that he or she will not buy imported seafood, in Wisconsin the average customer disagrees with that statement. The difference in answers is significant

9. Consistently, both states oppose "importing seafood that competes" (an admittedly somewhat loaded question). However, the resistance in Mississippi is significantly higher than in Wisconsin.

10. In Mississippi the consumer finds the local product clearly fresher. In Wisconsin the consumer finds the local seafood fresher too, but much weaker. Again, the difference is significant, with added meaning given the proximity to sea.

11. Significantly fewer people in Wisconsin ask for the origin of their seafood than in Mississippi. From the breakdown in frequencies (not tabulated here) we can deduct that 28.1 % agree or strongly agree with this statement in Mississippi. In Wisconsin this is only 16.5 %.

12. In Mississippi there are many more consumers who refuse to order imported seafood as 32.6 % agree or strongly agree with the statement (not tabulated here). In Wisconsin this is only 13 %. This leads to the significant difference that can be seen on the Likert scale means.

13. Both states agree that it is wrong to undersell domestic seafood, but Mississippi is again much more outspoken in that than Wisconsin.

14. And finally, in Wisconsin there is a majority that just looks at price, while in Mississippi a majority disagrees with that statement.

It is interesting to note that for all questions where there the difference in answers is significant, the answers in Wisconsin are closer to (3) on the 1-5 Likert scale, i.e., closer to "no opinion", and for all those items the standard deviation for the answers in Wisconsin is smaller than the standard deviation for the answers in Mississippi. In Mississippi not only the answers are more extreme and further from the middle road of (3), but also the variety of answers is larger as expressed in a larger standard deviation. Clearly a considerable part of the consumers in Mississippi are much more opinionated about this subject, and tend to give more extreme answers, in both directions.

COMPARING Z_{obs} TO ONE-WAY ANOVA

This experiment compared the two previous analysis: the Z_{obs} to the one-way ANOVA. While these are two very different tests, the basis for each comparing different items (correlation matrices to means), the comparisons in Table 6 below contribute to the evaluation of the sub-hypotheses in 3.6 below. Only three of the thirteen compared provided different results.

Table 6: Comparison table: Z_{obs} TO ONE-WAY ANOVA		
Measure	Z_{obs}	One-Way ANOVA
1. Age	*Not tested See 3.5 below*	Similar
2. I find that imported seafood looks and tastes like domestic seafood.	Dissimilar	Dissimilar
3. I find that imported seafood is a better bargain than domestic seafood.	Dissimilar	Dissimilar
4. I find that the available variety of imported seafood is similar to the available variety of domestic seafood.	Dissimilar	Dissimilar
5. I find that imported seafood stores in the freezer as well as domestic seafood.	Dissimilar	Similar
6. I find that imported seafood packaging looks more appealing than the packaging of domestic seafood.	Dissimilar	Similar
7. When given a choice, I buy domestic seafood instead of imported seafood.	Similar	Similar but to different extent
8. I will not buy seafood that is shipped from another country.	Similar	Dissimilar
9. I am in favor of importing seafood from overseas that competes with our domestic seafood producers.	Similar	Similar but to different extent
10. I find imported seafood tastes fresher than domestic seafood.	Dissimilar	Dissimilar
11. When dining out, I ask where the seafood comes from that the restaurant is serving.	Similar	Similar
12. If I know that a restaurant is serving imported seafood, I will not order the dish that contains imported seafood.	Similar	Similar but to different extent
13. I think it is wrong to sell foreign seafood cheaper than domestic seafood.	Similar	Similar but to different extent
14. I buy seafood based upon price, not based upon where it comes from.	Dissimilar	Dissimilar

THE INFLUENCE OF AGE UPON THE ANSWERS

To study the dependence of the results on age, data were divided in five age ranges: A One-Way Anova was run for Wisconsin and Mississippi separately. For the Wisconsin data, the One Way Anova found only a statistically significant difference between the means of the different age groups in Measure 3: *"I find that imported seafood is a better bargain than domestic seafood."* The people between 40 and 50 (age group 4) gave this 3.5 +/- 0.946. This group agrees with the statement and it is a statistically significant difference. The over 60 group scores this item 3.20 +/- 1.06, so also

agree but less, but the difference with the other groups is not significant. The other three groups score below 3, i.e., they disagree with the sentiment. It is not clear why there is a difference in perception of between the older WI respondents that local seafood is more expensive and the younger ones who are very close to "no opinion." It is possible that the older generation in Wisconsin is more price-conscious while the younger generation does not care about fresh vs. frozen. This corresponds to the literature which indicates that as one ages, one becomes more conscious about the healthiness of their foods. In Mississippi significant differences between age groups are much more prevalent. Only in Measure 11, *dining*, the generations have no statistically different value for the means of the items.

Table 7: Distribution of respondents by age

Age range	n =200 (Wisconsin)	n = 331 (Mississippi)
1 18 - 29	61	130
2 30 - 39	49	49
3 40 - 49	50	77
4 50 - 59	20	48
5 ≥ 60	20	27

Measure 2: "I find that imported seafood looks and tastes like domestic seafood." The youngest group gives this 2.82 +/- 1.29, i.e., not so far from "no opinion," but still disagreeing with statement. The oldest group of over 60 gives this item 1.93 +/-1.21, vehemently disagreeing that imported seafood tastes like domestic.

Measure 3: "I find that imported seafood is a better bargain than domestic seafood." Here too the people from Mississippi disagree, but the younger generation disagrees less (2.91 +/-1.12) then the older generation. The oldest generation is again, the most extreme, 2.07 +/-1.17.

Measure 4: "I find that the available variety of imported seafood is similar to the available variety of domestic seafood." Here the young generation considers it a toss-up, 3.11 +/- 1.09, while the oldest generation is again the most outspoken, with 2.52 +/- 1.25. Probably the youngest generation is willing to consider types of fish that are not available from local sources, while the older people only consider the same types of fish that they have eaten their whole life. The different values of the means between the generations are not large and not statistically significant.

Measure 5: "I find that imported seafood stores in the freezer as well as domestic seafood." Again the oldest and youngest generation are the most extreme, with the 18-29 year old group scoring 3.28 +/- 1.12 and the over 60 scoring 2.59+/- 1.08. One would have expected that with a fairly objective item like this the agreement would have been closer, but the older generation seems influenced by its anti-import attitude.

Measure 6: "I find that imported seafood packaging looks more appealing than the packaging." There is not much difference in scores here. Only the difference between the oldest and the youngest group is statistically significant in a post-hoc Tukey HSD analysis, with the youngest group scoring 3.25 +/- 1.06 and the oldest 2.56 +/- 1.05. Both scores are close to "no opinion."

Measure 7: "When given a choice, I buy domestic seafood instead of imported seafood." While in a post-hoc analysis there are some differences between means, what is most remarkable is how strong the opinions are. Mississippians would avoid imported seafood if they have the chance. The score is less extreme for the youngest group, 3.94 +/-1.25, the oldest group's score is 4.52 +/- 1.01, showing how many subjects in this class chose the highest score possible, 5, on the Likert scale.

Measure 8: "I will not buy seafood that is shipped from another country." Here the youngest groups are generally more indifferent (scores around 3) than the older groups. The oldest group is he most extreme, 3.89 +/- 1.28.

Measure 9: "I am in favor of importing seafood from overseas that competes with our domestic seafood producers." The people in Mississippi are generally opposed, with the oldest people again the most extreme (1.89 +/- 1.34) and the youngest at 2.62 +/-1.20, a much weaker opposition.

Measure 10: "I find imported seafood tastes fresher than domestic seafood." Here too the trend is the same. The youngest generation has the least resistance against imports, with 2.42 +/- 1.29, while the oldest generation scores nearly a point lower, at 1.52 +/- 0.85.

Measure 11: "When dining out, I ask where the seafood comes from that the restaurant is serving." This is the only item where a Tukey HSD post-hoc treatment does not yield any statistically different results for the means in the groups. Most answers hover around the 3, indicating that in spite of their strong convictions most people will not ask their servers in a restaurant what the origin of the seafood is.

Measure 12: "If I know that a restaurant is serving imported seafood, I will not order the dish that contains imported seafood." All answers hover within 0.25 of 3 "no opinion." So in spite of their strong convictions and opinions, when people go out to restaurants they seem to let their choice be determined by other factors. Being opposed to foreign imports of seafood is a socially requested answer in Mississippi, and like more often, people will not always follow the precepts that they think society as a whole should follow when they have to make the choice individually.

Measure 13: "I think it is wrong to sell foreign seafood cheaper than domestic seafood." Again, the oldest group is the most outspoken, it scores 4.11 +/-1.19. The other age groups score lower.

Measure 14: "I buy seafood based upon price, not based upon where it comes from." Again here the oldest group disagrees the most with this statement (score 2.07 +/- 1.27) and the differences between the means are significant. The score of the youngest group is around 3, "no opinion."

Given the information from this analysis, it is seen that Wisconsin attitudes are less extreme regarding seafood and that age does not influence the position with respect to imports as it does in Mississippi. There, age is an important factor.

This can be confirmed in a different way: In Wisconsin there is no significant correlation at the 5% level (two-tailed) between age and any of the other variables. In Mississippi age is correlated significantly with all the other items! (At the 5% level and sometimes at the 1% level, at strengths between 0.25 and 0.50.)

It is seen that the structure of the answers is very different between Wisconsin and Mississippi; it is therefore not useful to compare answers between the two states for each age group separately. It is not age that influences the differences between the states, it is the different attitude people in the two states have about their seafood.

The boxplots below are for Wisconsin on top, Mississippi on the bottom. Each square contains all variables for one particular age group. It is clearly seen that the answers in Mississippi are more extreme and that they get extremer with the age of the respondents. Only the under-30 crowd is fairly neutral in its approach to the issue.

Table 8: Wisconsin Age grouping Boxplots

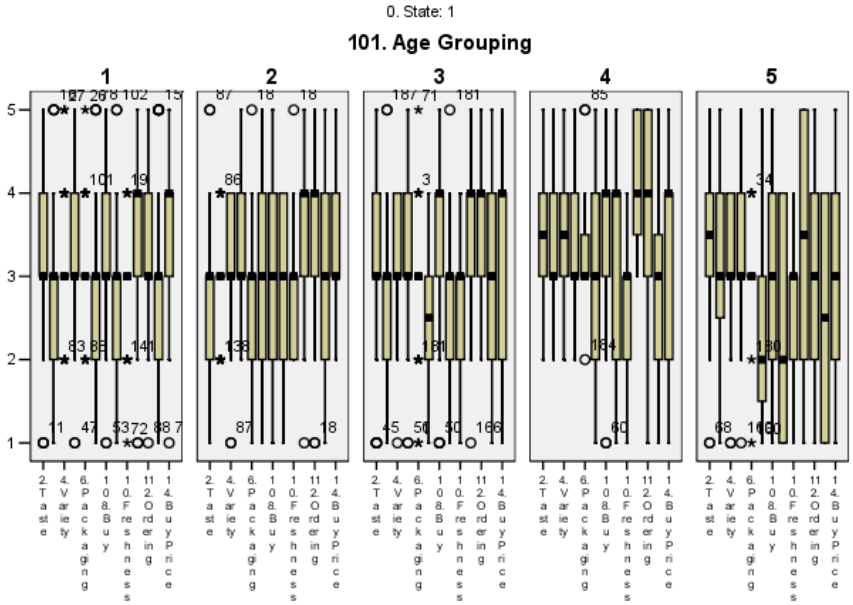
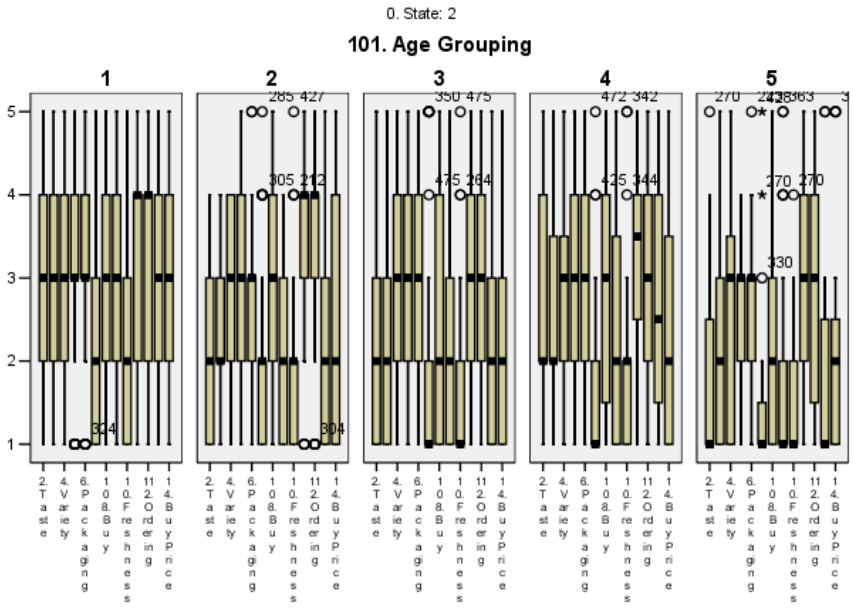


Table 9: Mississippi Age grouping boxplots



DISCUSSION

Discussion of Sub-Hypothesis 1:

"Older people care more about origin and taste."

The correlations in Tables 1 and 2 do not show impressive *r* values for variable No. 1, "age," and any of the remaining thirteen variables. However, as the correlation tables do not show the impact of various effects as one considers older vs. younger age brackets, those tables are irrelevant to proving or disproving this sub-hypothesis.

In Section 3.5, considering the ages grouped in Table 7. The results of this study clearly show that consumer choice in the selection of seafood is explained by the age of the consumer. This finding reinforces the results of Rossen (1975), and Arndt, Solomon, Kasser and Sheldon (2004). As people age, they are more health-conscious and care more about quality of foods that they consume. Subsequently, while there are differences in the results between MS and WI, both indicate that older people do indeed place a higher priority upon the origin of food and upon its taste.

Discussion of Sub-Hypothesis 2:

"Younger people care more about price."

As in the explanation for sub-hypothesis 1, the correlations in Tables 1 and 2 do not show impressive *r* values for variable No. 1, "age," and any of the remaining thirteen variables. Moreover, as the correlation tables do not distinguish the influence of age upon the other variables, those tables are not meaningful to proving or disproving this sub-hypothesis.

As shown above, the results of the one-way ANOVA above reinforces the conclusion that age is a factor when clustering consumer trends that vary according to seafood pricing. As discussed above, differences in family structure as well as income and exposure to seafood products causes different perceptions in seafood products. Thus, the fresh vs. frozen, domestic vs. imported selections are seen via different psycho-social influences depending upon the era in which one spent their formative years of life and the norms of a seafood marketplace at that time. This further reinforces Rossen (1975), Arndt, Solomon, Kasser and Sheldon (2004), and the findings of Condrasky, Vinuya and Howell (2005) that some prefer the taste of IQF shrimp instead of fresh shrimp.

Discussion of Sub-Hypothesis 3:

National pride issues will be strong in both areas.

The correlations in Tables 1 and 2 show a spectrum of *r* values for variable 7: "choice," variable 8: "not buy," variable 9: "competition;" and variable 13: "sell price." when compared to the remaining variables. The correlations range from small to medium, both positive and negative. The stronger influences of national pride can be seen in Table 1 Mississippi correlations, than in Table 2, the Wisconsin correlation table, which is more aptly explained via the ANOVA test.

In general, from the results of the one-way ANOVA, it appears that national pride (in the form of resistance to imports, and preference/loyalty to domestic products) is able to be determined in both the Mississippi and Wisconsin datasets, but with older residents being more outspoken and with Mississippi residents having an even stronger opinion on the matter. However, the exception to this comes when seafood is ordered in a restaurant, at which point the factors of seafood origin and the application of national pride or bias has less of an influence on the choices being made.

The results of this study regarding national pride, as further defined as nationalism and/or national bias, reinforce the findings of Fernie, Hahn, Gerhard, Pioch, and Arnold (2006); Verlegh (2007), Zukin and Maguire (2004); and, Shoham, Davidow, Klein and Ruvio (2006).

Discussion of Sub-Hypothesis 4:

MS will have stronger preference for fresh seafood.

The correlations for Mississippi found in Table 1, show stronger opinions when variables include matters of taste and fresh or domestic seafood, than those found in the correlations for Wisconsin found in table 2. The one-way ANOVA results show that the Mississippi respondents to the study have a stronger affinity for fresh or domestic seafood than did the respondents in Wisconsin. This can be explained by the deep enculturation to the seafood industry of the Mississippi subjects who resided within minutes of the Gulf of Mexico, compared to the Wisconsin respondents who were over a thousand miles from the Gulf. The exception to this generally was more agreement between the Mississippi and WI groups when it came to dining out, but by far the respondents clearly showed greater consumer affinity for local seafood than did those in Wisconsin. This reinforces Verlegh (2007) and the desire of some consumers to protect the domestic economy, and Zukin and Maguire (2004)'s identification of consumer selection as including social and cultural processes.

Discussion of Sub-Hypothesis 5:

Coastal Mississippi will have stronger protectionist desires than inland Wisconsin.

The findings of this study as discussed above further reinforce the effect of proximity to the sea, local social and cultural aspects, and protectionist influences which have showed throughout this study that the Coastal Mississippi respondents have a stronger embrace of the domestic seafood market than do the inland respondents in Wisconsin. This further reinforces Fernie, Hahn, Gerhard, Pioch and Arnold (2006), as well as shows the similar desires of consumers around the world to protect their home markets, as seen in Shoham, Davidow, Klein and Ruvio (2006), Wirthgen (2005), Gill and Mercedes (1997), Russell and Valenzuela (2005), Bhuian (1997), Dou, Wang, and Zhou (2006), Vann (2005), and Caldwell (2002).

CONCLUSION AND RECOMMENDATION FOR FURTHER STUDY

This study reinforced prior studies which addressed the influence of location and the resulting cultural, societal and economic influences that they have upon consumer choice. It is important from an academic perspective to recognize the role that these factors play when considering studies in management, marketing and advertising to keep in the forefront that global, national and regional markets are not homogenous; that local factors can and do influence consumer behavior.

For the importer, and for purveyors of seafood at the different wholesale and retail levels, this study shows a strong market acceptance of imported seafood, but also that local market influences through nearby suppliers of fresh-caught seafood can and do create market loyalty and ultimately bias. This literally has the family-firm engaged in the seafood business in Mississippi competing with large multi-national seafood firms, and maintaining consumer loyalty, at least in their regions. On the other hand, it is easy to see that the inland seafood market, without the close and intimate influence of a local fishery, is less loyal to that which they either do not know or appreciate, showing different cultural influences in regions of the same country.

Further studies will be interesting as one considers the aging of the population. Perhaps longitudinal data collection would show the impact of working mothers as the norm, the convenience of prepackaged seafood and the development of tastes in younger people for IQF and other non-fresh seafood, and other influences that could over time increase or reduce the demand for fresh-caught seafood products.

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APPENDIX1

The research instrument used in MS and WI						
1. Age:_____						
Please circle the answer that most suits your response, from strongly agree to strongly disagree.						
		Strongly Agree	Agree	No Opinion	Disagree	Strongly Disagree
1	I find that imported seafood looks and tastes like domestic seafood.	5	4	3	2	1
3.	I find that imported seafood is a better bargain than domestic seafood.	5	4	3	2	1
4.	I find that the available variety of imported seafood is similar to the available variety of domestic seafood.	5	4	3	2	1
5.	I find that imported seafood stores in the freezer as well as domestic seafood.	5	4	3	2	1
6.	I find that imported seafood packaging looks more appealing than the packaging of domestic seafood.	5	4	3	2	1
7.	When given a choice, I buy domestic seafood instead of imported seafood.	5	4	3	2	1
8.	I will not buy seafood that is shipped from another country.	5	4	3	2	1
9.	I am in favor of importing seafood from overseas that competes with our domestic seafood producers.	5	4	3	2	1
10.	I find imported seafood tastes fresher than domestic seafood	5	4	3	2	1
11.	When dining out, I ask where the seafood comes from that the restaurant is serving	5	4	3	2	1
12.	If I know that a restaurant is serving imported seafood, I will not order the dish that contains imported seafood	5	4	3	2	1
13.	I think it is wrong to sell foreign seafood cheaper than domestic seafood	5	4	3	2	1
14.	I buy seafood based upon price, not based upon where it comes from.	5	4	3	2	1

INTERNAL RELATIONSHIP QUALITY: THE IMPACT OF RELATIONSHIP QUALITY ON INTERNAL CUSTOMER PERCEPTIONS

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ABSTRACT

The quality of internal exchange relationships within organizations between internal customers and suppliers is examined under psychological contract theory and analyzed using data collected across two organizations. Path analysis reveals that quality of the internal customer's relationship with their internal supplier is positively related to job satisfaction and both on-the-job and off-the-job embeddedness for the customer. Results from Sample 2 suggest that the internal customer's intention to turnover is shown to be significantly reduced by relationship quality. Overall, the study provides a link from internal exchange to job perceptions of job satisfaction, job embeddedness and intentions to turnover.

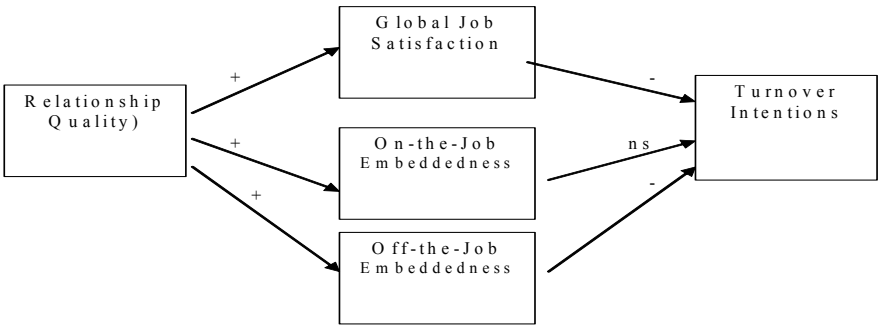
INTRODUCTION

Relationship marketing has become a heavily researched topic within the last decade; several studies call for the extension of relationship marketing to an internal or organizational setting (Bendapudi & Berry, 1997; Morgan & Hunt, 1994; Rust, Ambler, Carpenter, Kumar and Srivastava, 2004). Approximately 250 articles focusing on relationship marketing have been published the past 5 years with only 7 examining relationships in internal markets (Business Source Premiere, 2007). Internal markets refer to exchange structures comprised of individuals who are simultaneously internal suppliers to and internal customers inside the organization (Bowen and Schneider, 1988; Foreman and Money, 1995; Lings, 2004).

Berry and Parasuraman (1994) give three reasons for conducting employee research: (1) employees themselves are customers of internal services, (2) employees offer unique insights into variables that impact service quality in an organization as they consume such services daily, and (3) employees can offer pre-emptive information regarding failures or break-downs with external service delivery. Put simply, co-workers serve as the most readily used and richest source of information for employees regarding the organization (Dabos and Rousseau, 2004). Further, Gummesson (1995) believes that understanding and improving internal interactions are vital to the improvement of any external interaction such as service or product quality.

This study posits that an organization can benefit from improved relationships via psychological contract fulfillment between its internal exchange partners (i.e., employees) such that overall job assessments of satisfaction and embeddedness, both on-the-job and off-the-job embeddedness are positively impacted, while internal customer intentions to turnover are decreased (Figure 1). Data is reported from internal customers across two samples from organizations representing numerous internal customer-supplier relationships. Path analysis reveals that the quality of the internal customer-supplier relationship is a positive, significant predictor of job satisfaction and both on-the-job and off-the-job embeddedness. As expected, job satisfaction was shown to be a significant predictor of turnover across both samples, while off-the-job embeddedness was shown to be significant in only one sample. Further, Sample 2 reveals that internal customer-supplier relationship quality decreases internal customer intentions to turnover. A thorough discussion of the hypotheses, statistical results, managerial implications and suggestions for future research are presented in the following discussion.

FIGURE 1
Outcomes of Relationship Quality on Employee Intentions to Turnover



INTERNAL EXCHANGE: INTERNAL CUSTOMERS AND SUPPLIERS

Lusch, Brown and Brunswick (1992) define internal exchange as "…the methods used to satisfy needs within the organization" which can be exhibited by groups within organizations who choose to "create, exchange, and use or consume things of value internally" (p. 119). Bagozzi

(1975) categorizes internal market exchange between customers and suppliers as restricted exchange, which refers to the exchange of value between two parties due to the intimate environment in which these partners frequently exchange. Following Bagozzi's idea of restricted exchange, internal markets are (1) comprised of buyers and sellers called internal customers and suppliers, (2) exchange occurs between these two parties, where each has minimal expectation that the other will behave opportunistically and reciprocal exchange behaviors and times are relatively obvious to both parties, (3) the failure of one party to fulfill exchange expectations results in a negative reaction from the other, and finally, (4) exchange between the parties is relatively long-term or on-going, and social in nature (Bagozzi, 1975). Kotler and Levy define a customer, or client, as those who are the immediate recipients of an organization's good or service (1969). Likewise, internal customers exist within an organization and are supplied with products or services by coworkers (Gremler, et al, 1994). As colleagues, employees consume and supply services within the organization through dyadic interaction with one another (Gremler, et al, 1994).

RELATIONSHIP QUALITY: SOCIAL EXCHANGE AND PSYCHOLOGICAL CONTRACTS IN INTERNAL MARKETS

Relationships develop, deteriorate and dissolve as a result of the social exchange process (Burgess and Huston, 1979). Social exchange theory has provided the theoretical foundation for relationship marketing (Gounaris, 2005) as well as psychological contract theory (Roehling, 1997). Social exchange refers to "the voluntary actions of individuals that are motivated by returns they are expected to bring and typically do, in fact, bring from others" (Blau, 1964, p. 91). Here, entities join together only insofar as they believe and ultimately find it in their mutual interests to do so (Burgess and Huston, 1979). The authors suggest that exchange partners exhibit (1) an increased frequency of interaction, (2) a futuristic orientation, (3) specialized communication techniques, (4) increased honesty, and (5) increased goal synchronization (Burgess and Huston, 1979, p. 8). Each internal exchange partner begins to view the other's perspective as important, thus synchronizing their goals with those of their partners'. Resulting goal-oriented behaviors provide each partner with the feeling that their interests are inextricably linked.

Mutual social exchange, such as that in internal markets, requires that each member form their own intentions on what they will exchange with the other, as well as what they expect in return for their efforts. These intentions and expectations are formally known as psychological contracts. Psychological contracts developed between internal customers and suppliers serve to control this exchange-related behavior by outlining ever-changing promises, whether implicit or explicit, made regarding terms and conditions of a reciprocal agreement between an individual and another party (Rousseau, 1989). These contracts outline perceived behaviors, priorities, rights and obligations each individual has of other individual(s) within an exchange, given their own behavior (Schein, 1980). An important characteristic of these promises is that each individual believes that the

agreement and terms are mutual (Rousseau, 1989). Llewellyn (2001) found internal service delivery between internal customers and suppliers to be strengthened by psychological contract fulfillment between exchange partners. Based on his findings, the author recommends that future research examine the relational context of between colleagues, as is examined herein.

Relationship quality is proposed here as a 3-dimensional construct: an aggregate assessment of quality, and also assessments of trust and commitment to the relationship. The aggregate assessment of quality describes the overall perceptions of how well a relationship fulfills the expectations, goals and desires (Dwyer, et al, 1987; Henning-Thurau, 2000). Trust is defined as individual's abstract, positive expectations that they can count on a partner to care for them and be responsive to their needs, now and in the future (Berscheid, 1994). Trust is included in the majority of relationship quality studies (Crosby, Evans and Cowles, 1990; Doney and Cannon, 1997; Dwyer and Oh, 1987; Morgan and Hunt, 1994; Henning-Thurau, 2000). Morgan and Hunt (1994) believe that commitment serves as a sustaining force of relationships. Commitment, an individual's intention to stay in the relationship, has also been heavily researched (Anderson and Weitz, 1992; Dwyer and Oh, 1987; Hibbard, et al, 2001; Morgan and Hunt, 1994). In fact, commitment is the most common dependent variable examined in buyer-seller relationship studies (Wilson, 1995).

OUTCOME VARIABLES

A recent study found that voluntary turnover rates range from 6.5% to 34.0% depending on the industry (utilities and retail/wholesale, respectively) (IOMA.com). The study also found that on average, 62% of the workforce voluntarily left their organization. Major determinants of voluntary turnover intentions examined here include employee job satisfaction, (Hom & Griffeth, 1995; Hulin, 1991) and job embeddedness (Mitchell, Holtom, Lee, Sablynski and Erez, 2001).

Job Satisfaction

Job satisfaction is one's affective attachment to the job viewed either in its entirety (global satisfaction; long-term) or with regard to particular aspects (e.g., job satisfaction with coworker) (Tett & Meyer, 1993). Although job satisfaction is a mature construct in management research, there have been few linkages between it and marketing beyond what has been done in salesperson research (Brown & Peterson, 1993). Hom and Griffeth (1995) suggest that group cohesion serves as an antecedent to global job satisfaction. Since global job satisfaction is an aggregate, long-standing observation of one's job, internal customers carry with them a cumulative assessment of how satisfied they are with their job.

Mobley (1977) and subsequent researchers (e.g., Hom & Griffeth, 1995; Mobley, Hand, Baker & Meglino, 1979) described the process by which individuals evaluate the desire and ease of leaving and make turnover decisions. These authors believe that a number of job and organizational

characteristics, including co-worker relationships, influence job satisfaction. As internal exchanges with coworkers are successfully fulfilled, psychological contracts internal exchange partners share assume a more fully-developed and mutually-aligned form. The internal customer's assessment of coworker relationships improves. Therefore, the quality of internal exchange relationships should help form an internal customer's job satisfaction. Therefore, the following hypothesis is provided:

H1: The higher the quality of relationship an internal customer shares with their internal supplier, the higher internal customer job satisfaction.

Job Embeddedness

Embeddedness reflects how individuals become part of a social web and how that social web connects them to the organization (Lee, Mitchell, Sablynski, Burton and Holtom, 2004). Relational links between suppliers and customers, their co-workers and their job serve to embed them within the organization and the community (Mitchell, Holtom and Lee, 2001; Mitchell, Holtom, Lee, Sablynski, & Erez, 2001). Specifically, Lee et al (2004) believe that individuals are linked through three variables (links, fit and sacrifice) to two main externalities, the organization in which they work and the community in which they live. Therefore, two composites are formed to assess both on-the-job and off-the-job embeddedness. As the organization-related links are improved by internal exchange psychological contract fulfillment, the more likely an internal customer is to feel enmeshed in that relationship and the entire organization and their community.

H2a: The higher the quality of relationship an internal customer shares with their internal supplier, the higher internal customer on-the-job embeddedness.

H2b: The higher the quality of relationship an internal customer shares with their internal supplier, the higher internal customer off-the-job embeddedness.

Turnover Intentions

Turnover refers to the voluntary or involuntary exit of an employee from the organization. Costs associated with turnover may be very high to organizations as Cascio (1987) calculated them to be equivalent to the employee's first year's salary. Over the past 50 years, the turnover literature has made a significant attempt to identify those variables that enter into an employee's decision to quit, and which are most influential in the turnover process (Mobley, 1977; Mobley, Hand, Baker and Meglino, 1979; Lee & Mitchell, 1994; Hom & Griffeth, 1995; Allen & Griffeth, 1999; 2001). Authors warn, however, that the all of the variance in the turnover decision has not been accounted for (Hom & Griffeth, 1995).

A great deal of research has explored the reasons individuals choose to quit and the processes by which these individuals make quit decisions. Mobley (1977) and subsequent researchers (e.g., Hom & Griffeth, 1991; Mobley, Hand, Baker & Meglino, 1979) described the process by which individuals evaluate the desire and ease of leaving and make turnover decisions. Individuals who become dissatisfied are more likely to search for alternative opportunities and to evaluate those opportunities more favorably compared to their present job. Individuals who locate a more favorable alternative or perceive that they have many such alternatives available are much more likely to quit. Some individuals become so dissatisfied that they choose to quit even if no alternative is readily available. Research has also focused on the importance of how embedded an employee is in the organization and the community (Mitchell, Holtom, Lee, Sablynski, & Erez, 2001). Over time, employees become enmeshed in a web of relationships connecting them to their organization, job, co-workers, and community, and the more embedded one is the greater the sacrifices involved in leaving, the less likely they are to turnover. Past findings do suggest, however, that when job satisfaction and organizational commitment are controlled, off-the-job embeddedness will remain significantly related with reduced turnover while on-the-job will not be significantly related (Lee, Mitchell, Sablynski, Burton and Holtom, 2004). The authors argue that as an individual's attitude toward their job (i.e., job satisfaction) is controlled, on-the-job considerations do nothing to change the quit decision while off-the-job considerations do add new information to the quit decision and are therefore capable of impacting turnover (Lee, et al, 2004). The following hypothesis is given based on these past findings.

H3a: The greater internal customer global job satisfaction, the less the internal customer intends to turnover.

H3b: As job satisfaction is controlled for, off-the-job embeddedness will decrease the internal customer's intentions to turnover while on-the-job embeddedness will not impact turnover intentions.

Further, Rousseau (2001) finds a co-worker influence on the employer-employee psychological contract and the employee's decision to turnover. When psychological contracts with internal partners are fulfilled, relationships among the colleagues improve, thus increasing employee retention. Therefore, an indirect effect of relationship quality on turnover intentions is hypothesized:

H4: The relationship between relationship quality and decreased internal customer intentions to turnover is mediated by internal customer job satisfaction and job embeddedness.

METHOD

Measures for all constructs were subjected to both exploratory and confirmatory factor analyses in order to assess dimensionality and convergent and discriminant validities. Standardized factor loadings, t-values and model fit indices were used to assess the 2nd-order relationship quality construct. The trust dimension of relationship quality was assessed using an 8-item scale adapted from Morgan and Hunt (1994). Commitment to the relationship was captured using an 8-point scale adapted from Anderson and Weitz (1992). Wong and Sohal (2002) used one item to tap global quality of a relationship. In an attempt to provide a sufficient number of items for purification, two new items were added: "In general, I feel that the relationship I have with this individual is" and "Compared to relationships I have with others, mine with this individual is". Since there had been no prior use these measures (global relationship quality, trust, relationship commitment) to capture relationship quality, exploratory and confirmatory factor analyses were performed in order to establish the dimensionality, reliability and validity of the relationship quality scale. Items with poor loadings, or those that overlapped onto multiple factors were removed; this removal resulted in a 3-dimensional, 11-item scale, with a reliability of .94 for Sample 1 and .93 for Sample 2. Price's (1977) 1-item measure was used to capture global assessment of job satisfaction.

The shortened 18-item job embeddedness scale recently developed by the same group of researchers responsible for the original scale was used here (Holtom and Lee, 2005). As the shortened scale has just recently been introduced and been exposed to limited testing, its integrity is not as well documented as the original version. Consequently, confirmatory factor analysis was performed in order to confirm that each item loaded significantly onto one of two dimensions (Lee, et al 2004). The scale demonstrated the expected dimensionality with all 18 items loading significantly. Reliability for the on-the-job scale was .66 (Sample 1) and .81 (Sample 2) and off-the-job had a reliability of .86 (Sample 1) and .77 (Sample 2). Employee intentions to voluntarily leave the organization were captured with a 2-item measure: "What are the chances that you will remain in the profession but leave the organization at or before the end of the year?" and "I intend to remain in my profession but leave this organization at or before the end of this year." Respondents indicated their intentions on a 5-point scale: 1 = no chance; 5 = 100% chance. Inter-item reliability is sufficient for the scale with a coefficient alpha of .93 for Sample 1 and .77 for Sample 2.

Online sample surveys were administered to 155 employees of a Southeast facility of a multinational medical supply company over a 3-week time period. Due to the decentralized structure of the company, there was no internal supplier who served everyone. Therefore, internal customers were assigned particular internal supplier departments upon which to base their responses. A total of 46 internal customers participated. The sample of respondents consisted primarily of Caucasian (87%) males (53%), with an average age of 37. 68% of the respondents had been employed by the organization for 1-10 years. 86% of the sample held at least a 4-year degree. The average salary of respondents ranged from $50,000-75,000.

Non-response bias was assessed in two ways: by comparing late responders with early responders (Armstrong and Overton, 1977), and also by comparing partially-completed surveys to early and late completed surveys. There were no significant differences between respondents. In order to further assess non-response bias, those who self-selected from the survey, yet completed a significant portion, were compared to both early and late respondents. Again, no significant differences between those who provided responses to all questions and those who partially completed the survey were found.

Path analysis was used to test the hypotheses (Bagozzi and Heatherton, 1994). LISREL 8.51 was used to perform the path analysis (Joreskog and Sorbom, 1993). Item scores for each scale were summed and then divided by the number of items used to capture the construct to form one composite score for each construct. As noted in Table 1, relationship quality is a significant predictor of internal customer job satisfaction (t-value: 5.02) supporting H1 and job embeddedness both on-the-job (t-value: 6.46) and off-the-job (t-value: 3.69) thus supporting H2a and H2b, respectively. In accordance with H3a, job satisfaction was significantly negatively related to turnover intentions (t-value: -2.45). Partial support was found for H3b as on-the-job embeddedness was not significantly linked to a decrease in turnover (t-value: .03) as was expected. H2b, however, was not supported (t-value: .74). As a side note, reduced form equation results fail to show a significant impact of relationship quality on decreased turnover (t-value: -1.45). Results from the path analysis (H4) are provided in Table 1, suggesting that the model displays ill-moderate fit with the data ($\chi^2 = 31.68$) (df = 4) (p-value = .00), RMSEA = .42, NFI =.68, GFI = .76, CFI = .69).

Similar to the first sample, online surveys were administered to 300 employees of a bank located in the Southeast where potential respondents were informed of the internal supplier upon whom they should base their responses. 154 internal customers participated. Fortunately, this company's structure allowed all respondents to use the same internal supplier, the Human Resources Department, upon which to base their responses. Here, 92% of respondents had been employed by the bank from 1-10 years. Respondents had an average age of 40, were predominately female (61%) with 38% having earned a 4-year degree.

The parameter estimates suggest that as hypothesized, relationship quality was a significant predictor of job satisfaction (t-value: 5.87) thus supporting H1. Relationship quality was also found to be a significant predictor of on-the-job and off-the-job embeddedness (t-values: 3.98 and 3.20, respectively) thus providing support for both H2a and H2b. H3a was also supported as job satisfaction was shown to be a significant predictor of decreased intentions to turnover (t-value: -4.22). Also as expected, on-the-job embeddedness was not found to be a significant predictor of turnover (t-value: .37) while off-the-job embeddedness was found to be significant (t-value: -2.18) providing full support for H3b. Unlike Sample 1, the reduced form equations here show that relationship quality is a significant predictor of turnover intentions (t-value: -3.54). Results from the path analysis are provided in Table 2, suggesting that the model displays moderate-ill fit with the data ($\chi^2 = 87.45$) (df = 4) (p-value = .00), RMSEA = .36, NFI =.48, GFI = .83, CFI = .47).

Table 1: Model Parameter Estimates and Goodness of Fit Statistics
Sample 1 (n=46)

Hypothesis	Model Parameters	Standardized Estimate	t-value
H1	Relationship Quality→Job Satisfaction	.64	5.02
H2a	Relationship Quality→On-the-job Embeddedness	.56	6.46
H2b	Relationship Quality→Off-the-job Embeddedness	.40	3.69
H3a	Job Sat.→Turnover Intentions (-)	-.25	-2.45
H3b	On-the-job Embeddedness→Turnover Intentions (ns)	.00	-.03
	Off-the-job Embeddedness→Turnover Intentions (-)	.09	.74
Reduced Form Equation:		Estimate	t-value
	RQ→Turnover Intentions	-.12	-1.45
Goodness-of-Fit Statistics (H4):			
χ^2 = 31.68 (df =) (p-value = .00)			
RMSEA = .42 NFI = .68 CFI = .69 GFI = .76			

Table 2: Model Parameter Estimates and Goodness of Fit Statistics
Sample 2 (n=154)

Hypothesis	Model Parameters	Standardized Estimate	t-value
H1	Relationship Quality→Job Satisfaction	.49	5.87
H2a	Relationship Quality→On-the-job Embeddedness	.25	3.98
H2b	Relationship Quality→Off-the-job Embeddedness	.14	3.20
H3a	Job Sat→àTurnover Intentions (-)	-.22	-4.22
H3b	On-the-job Embeddedness→Turnover Intentions (ns)	.03	.37
	Off-the-job Embeddedness→Turnover Intentions (-)	-.23	-2.18
Reduced Form Equation:		Estimate	t-value
	RQ→Turnover Intentions	-.13	-3.54
Goodness-of-Fit Statistics (H4):			
χ^2 = 87.45 (df =) (p-value = .00)			
RMSEA = .36 NFI = .48 CFI = .47 GFI = .83			

DISCUSSION

This study investigates psychological contract fulfillment among internal exchange partners as it is manifested as the internal customer's perception of the quality of their relationship with internal suppliers and the impact of that perception of quality on overall job assessments (e.g., job satisfaction, job embeddedness). Further, internal customer intentions to turnover are examined. Sample 1 utilizes data gathered across multiple departments within one multinational form based on the relationship they share with supplier departments as a whole, as well as the principle representative of that department. Sample 2 contains responses from internal customers across several departments based on only one internal supplier department: HR. Both samples produce similar results: internal customer-supplier relationship quality is a significant predictor of intentions to turnover. Therefore, as psychological contracts are fulfilled, internal customer desire to leave their job decreases. Further, job satisfaction is both positively impacted by internal exchange relationship quality and negatively related to turnover intentions. These results are expected based on Hom and Griffeth's (1995) proposed impact of met expectations on job satisfaction.

On-the-job embeddedness was not expected to significantly predict intentions to turnover. Accordingly, on-the-job embeddedness was not significantly related to turnover in either of the two samples. However, off-the-job embeddedness was hypothesized to be a significant predictor or turnover and was found to be so in sample 2 only. The lack of significance in sample 1 could be a result of its small sample size (n=46).

Approximately 35% of currently employed people are actively seeking alternative employment, while another 40% are passively doing so (IOMA.com, 2005). This study is unique in assessing how the quality of the internal exchange relationship impacts overall employee job perceptions. The relationship between internal suppliers and customers does impact the internal customer job satisfaction, both on-the-job and off-the-job embeddedness in the hypothesized directions. Further, sample 2 results suggest that relationship quality has a direct impact on turnover intentions among internal customers. Therefore, new evidence is provided here that these internal exchange relationship can and do impact overall job assessments made by internal customers.

MANAGERIAL IMPLICATIONS

As organizations look for ways to retain valued employees, they can take advantage of resources already in place within the organization—other employees. By urging internal supplier groups to strengthen the relationships they share with those whom they serve within the company, the organization will benefit in two main ways: (1) identify principle representatives of supplier groups, or those individuals who are primarily responsible for they way internal customers feel toward the entire supplier group, and (2) help to orchestrate positive interaction between internal

customers and suppliers. By nurturing internal exchange relationships, organizations should be able to reduce employee turnover and also increase employee job satisfaction and job embeddedness.

LIMITATIONS AND FUTURE RESEARCH

There are several limitations created by the size of the research samples used in this study. First, given a desired effect size (ES) of .40, power of .95, and alpha of .05, the size of both customer samples should have been at least 163 (Pedhazur and Schmelkin, 1991). This sample size was almost reached in sample 2. However, due to restrictions on available organizations willing to participate in the research and the low number of individuals within the organization, that target was not reached. Future data collections could strive to exceed 163.

The data did not fit the model proposed here (Figure 1). The lack of significance is most likely due to omitted mediators which exist between relationship quality and turnover intentions. Future research should examine many possible areas in order to expound on the results of this study such as internal service quality, organizational politics and favoritism, organizational commitment, or possibly a facet measure of job satisfaction with coworker. Further, potential moderating variables could include internal customer organizational tenure or internal exchange climates in past work experiences. Future research should also examine the antecedents of internal partner relationship quality in an attempt to provide managers with concrete activities which will improve internal exchange relationships as well as employee satisfaction, job embeddedness and ultimately intentions to turnover. Overall, this is a significant step in linking the quality of internal exchange relationships to voluntary turnover.

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SERVICES MARKETING: THE MEDIATING ROLE OF CUSTOMER SATISFACTION IN THE HAIR CARE INDUSTRY

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ABSTRACT

This research explores the relationship between customers' loyalty and satisfaction with their hair care professionals. Although the marketing literature is replete with studies that examine the interaction between service providers and customers, the extant literature is almost silent regarding hair care service providers and their clients' loyalty and satisfaction. Latent variable modeling was employed to evaluate the research hypotheses. We posited that the relationship between customer loyalty and its antecedents was mediated by customer satisfaction. This claim was supported by our findings. We discussed implications, limitations, and future research suggestions.

INTRODUCTION

The service industry accounts for more than fifty percent of the world's gross national product (Cronin & Taylor, 1992) and is therefore an important economic market. Indeed, a sector of the service industry, the hair care industry, has annual sales that exceed $6 billion according to a popular web domain (MarketResearch.com, 2005). Despite its multi-billion dollar impact on the American economy, there is a dearth in the literature regarding the relationship between hair care providers and their customers' loyalty and satisfaction. A search of several popular databases (i.e., ABI/INFORM, GALILEO, PSYCHINFO, Business Premier) did not reveal much empirical research that addressed this important relationship. Therefore, the current study attempts to address this gap in the literature by investigating the relationship between hair care providers and their clients' loyalty and satisfaction. The research hypotheses were evaluated using latent variable modeling techniques.

LITERATURE REVIEW

Satisfaction is an attitude formed by comparing the quality expected and the quality received (Spreng, MacKenzie, Olshavsky, 1996; Oliver & Swan, 1989; Oliver, 1980). Furthermore, it is an important contributor to the post-purchase attitude and repeat-purchase intentions of consumers (Anderson, Fornell & Lehman 1994; Zeithaml, Berry & Parasruramn, 1996). However, only one study (Auh, Salisbury & Johnson, 2003) has examined the loyalty and satisfaction of customers of

hair care professionals, but Auh et al's focal point was on the ordering effects of questionnaire items instead of the consumer behavior of clients.

Jacobs-Huey (2006) focused on the necessity of hair care services and describes African American hair care as more than just a service rendering event; the author posited that it is not just the "giving and receiving of hair care, but also that cultural exchange occurs during the process of the provider-client interaction. Jacob-Huey observed that hairstyle decisions seldom conform to the exclusive whims of stylists, nor did they always adhere to the "client is always right principle" either. This interaction, however, was not only seen in the African American culture. Gimlin (1996) and Furman (1997) had similar findings in their respective studies of salon encounters involving European and Jewish American women.

Existing research indicates that hair care providers need advanced salon skills to provide their diverse customers with the latest styles (Jacob-Huey, 2006). Therefore, basic knowledge about hair care is a necessary but insufficient condition for customer satisfaction in the hair care industry. Jacob-Huey also found that after clients have had several visits to the salon, customers and hairdressers develop a bond of trust that may lead to customer satisfaction. Both parties enact authoritative stances by raising questions, making suggestions, and ratifying or objecting to hair-care recommendations according to Jacobs-Huey. However, the author observed that some hair care providers resent negative verbal customer feedback and do not feel appreciated for the time and energy required to achieve and maintain specific hairstyles. Jacobs-Huey described these relationships as client-stylist negotiations. Often clients may want to choose a look or style that may not promote healthy hair, since some customers may be more concerned with instant gratification than long-term hair care and healthy hair considerations.

Although brand loyalty is a well-researched inquiry, there is a dearth of literature regarding brand loyalty of consumers and their hair care providers. In this study we define brand loyalty as "a deeply held commitment to rebuy or repatronize a preferred product/service consistently in the future, thereby causing repetitive same-brand or same brand-set purchasing, despite situation influence and marketing efforts having the potential to cause switching behavior" (Oliver, 1999, p.34). Thus, consumers continue to buy goods and/or services that provide them some degree of satisfaction and utility. In fact, marketing practitioners and researchers alike have posited that conspicuous consumerism is the core of the capitalist system in America.

Other scholars have found that consumers switched brand (or service providers) due to the influence of price variety and product-related features. Chandhuri and Holbrook (2001) examined two facets of brand loyalty and found that "brand trust and brand affect are separate constructs that combine to determine two different types of brand loyalty---purchase loyalty and attitudinal loyalty---which in turn influence such outcome-related aspects of brand loyalty as market share and price respectively" (p. 83). Chaudhuri and Holbrook advanced that brand performance is dependent upon utilitarian value, hedonic value, brand trust, brand affect, purchase loyalty, attitudinal loyalty,

market share and relative price. Based on the previous discussion, we propose the following hypothesis:

H1: There will be a positive relationship between customer loyalty and satisfaction.

Interaction is defined in the Merriam-Webster Online Dictionary (2007) as a mutual or reciprocal action or influence. In the hair care industry, good provider interaction means that the provider knows personal characteristics of the client such as the client's name, hair texture, what the client does with his or her hair at home, previous hairstyles, and what the client does for a living. According to researchers (Campbell & Davis, 2006; Gremler & Gwinner, 2000; Morgan & Hunt, 1994), both rapport and relationship marketing is enhanced by excellent provider-client interactions in the services marketing industry.

Indeed, when hair care providers maintain a good relationship with their clients it helps to promote customer loyalty. This type of interaction also leads to client comfort. Consequences of client comfort can include increased disclosure, confidence, trust, commitment, self-esteem, reduced perceived risk, satisfaction and improved relational exchange (Spake, Beatty, Brockham, & Tammay, 2003). In view of the previous discussion we offer the following hypothesis:

H2: Service provider interaction will be positively related to customer loyalty and satisfaction.

Service quality has been defined as a form of attitude, related to but not equivalent to satisfaction that results from the comparisons of expectations with performance (Bolton & Drew 1991a; Parasuraman, Zethaml, & Berry 1988). In order to produce quality service, hair care providers must have the required skills and knowledge to perform the service. Hair care providers must be consistent in their performance.

Influential studies (Buzzell & Gale 1987; Phillips, Chang & Buzzell 1983; Zeithaml, Berry & Parasuraman, 1996) using the Profit Impact of Market Strategy data set have uncovered considerable connection among service quality, marketing variables, and profitability. The results from these studies show that companies offering superior services achieve greater than average market share growth (Buzzell & Gale 1987). Moreover, the mechanisms by which service quality influences profits include increased market share premium prices (Phillips, Chang, & Buzzell 1983; Zeithaml, Berry & Parasuraman 1996) and that businesses in the top quintile of relative service quality on average realized an 8% higher price than their competitors (Gale, 1992; Zeithaml, Berry, & Parasuraman, 1996). In view of the aforementioned discussion of the literature we pose the following hypothesis:

H3: Hair quality will be positively related to customer loyalty and satisfaction.

The Merriam-Webster Online Dictionary (2007) defines timeliness as the ability to "quickly access" something. In the hair care industry, timeliness equates to being able to satisfy customers' demand for fast and reliable hair care services. Therefore, customers want to come at a specific time and actually receive timely services. Thus, timeliness may be an important predictor of customer satisfaction and loyalty. Scheduling, the ability to conveniently make an appointment, may also be an important determinant of satisfaction and loyalty. According to Garfein (1988), "fast service leads to satisfaction and slow service to dissatisfaction" (p. 38).

The hair care atmosphere is defined as an enjoyable service environment that is experienced by the customer. Bitner (1992) referred to the service facility as the "servicescape" (p. 66) and opined that it may have a profound effect on customer satisfaction, especially if clients spend a substantial amount of time at the facility, which is true of barbershops and hair salons. We conjecture that atmosphere, timeliness, and scheduling will be positively related to loyalty and satisfaction. In addition, we also advance that customer satisfaction may mediate the relationship between customer loyalty and its antecedents. Thus, we will evaluate the following hypotheses:

H4: Atmosphere will be positively related to loyalty and satisfaction.

H5: Timeliness will be positively related to loyalty and satisfaction.

H6: Scheduling will be positively related to loyalty and satisfaction.

H7: Satisfaction will mediate the relationship between customer loyalty and its antecedents (a. provider interaction, b. hair quality, c. timeliness, d. scheduling, and e. atmosphere).

METHOD

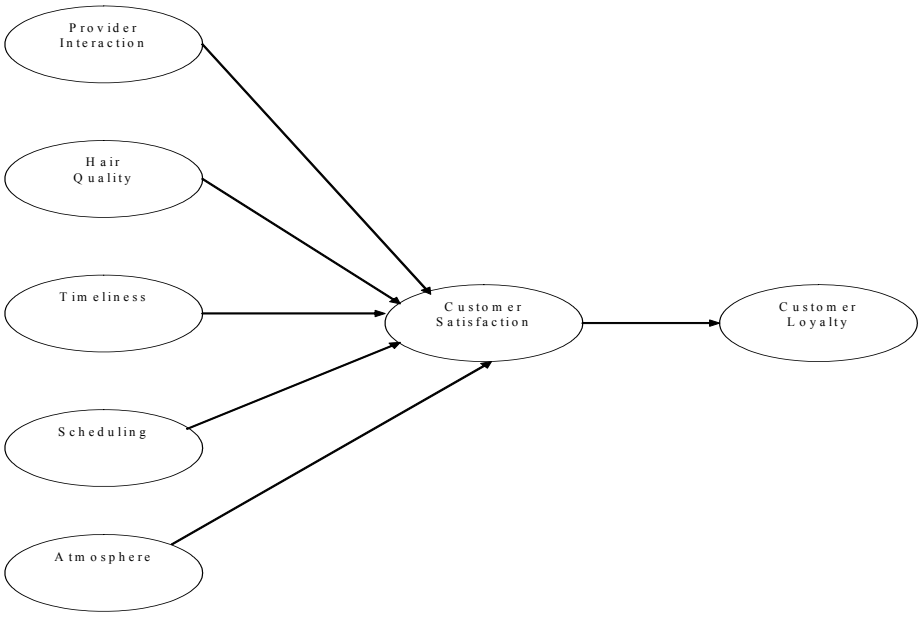
Participants completed a five-page survey instrument during regular class periods. The instrument took approximately 15 minutes to complete. All participants were volunteers for this research study.

We used the Customer Satisfaction Scale (CSS) and a Background Information Form (BIF). The CSS is a 10-point, 20-item instrument that is anchored from 1 (Strongly Disagree) to 10 (Strongly Agree) and was developed by Auh et al. (2003). An example item from the CSS is "My hair care provider cuts my hair evenly." We used the BIF to record demographics such as race, age, and gender. The reliability for the overall Customer Satisfaction Scale was 0.91, which is well above the established threshold value of greater than 0.70 for research purposes (Nunnally, 1978).

The sample consisted of 420 undergraduate students from a comprehensive northeastern university in the United States. Most of the participants (98.7%) in this study were between the age ranges of 18 to 24 years. Females constituted 63% of the respondents. In terms of ethnicity, the sample consisted of 92.7 percent African Americans, 0.3 percent Caucasians, 2.1 percent Hispanics, 0.3 percent Asians, and 4.7 percent Other. The class rank distribution was 16.7 percent freshman, 25 percent sophomores, 26.6 percent juniors, and 31.8 percent seniors. Most respondents were business and liberal arts majors, 83.1% and 14.3%, respectively. Only 7.8% of the respondents reported working full-time, and 69.5 percent of the students did not work. The average grade point average was 3.25 on a 4.0 scale.

The proposed hair care provider model presented in Figure 1 was tested using latent variable structural equation modeling (SEM) to evaluate the research hypotheses by using the analysis of moment structures (AMOS) computer program (Arbuckle & Wothke, 1995). SEM's major strength is that using latent variables permits estimation of relationships among theoretically interesting constructs that are free of the effects of measurement unreliability. The covariance matrix was used as the input for all models, and the maximum likelihood estimation procedure was employed to produce the model parameters. Since the data followed a non-normal distribution (kurtosis = 347.602, t-value = 114.804), bootstrapping techniques and the Bollen-Stine corrected p-value were employed to obtain unbiased model parameters (Arbuckle & Wothke, 1995; Bollen & Stine, 1992).

FIGURE 1
Hypothesized Hair Care Model.



In order to examine model fit, we utilized measures of absolute fit and incremental fit in order to determine how well the data fit the hypothesized model (Hair, Anderson, Tatham, & Black, 1998).

RESULTS

The means, standard deviations, reliability estimates, and zero-order correlations are provided in Table 1.

Table 1: Means, Standard Deviations, Zero-Order Correlations, and Reliability Estimates

Variables	Mean	s.d.	1	2	3	4	5	6	7
1.	Loyalty	15.87	3.87	(.76)					
2.	Satisfact	24.69	4.59	.52**	(.72)				
3.	Provider	25.83	5.65	.35**	.40**	(.86)			
4.	Quality	43.23	7.36	.46**	.65**	.43**	(.90)		
5.	Time	14.46	4.63	.23**	.34**	.27**	.38**	(.84)	
6.	Scheduli	25.43	5.17	.39**	.41**	.51**	.43**	.40**	(.85)
7.	Atmosp	16.13	4.17	.34**	.44**	.68**	.50**	.31**	.47**

n = 420; Reliability estimates are on the diagonals in parentheses. ** $p \leq .01$
Loyalty = Customer Loyalty
Satisfact = Customer Satisfaction
Provider = Provider Interaction
Quality = Hair Quality
Time = Timeliness
Scheduli = Scheduling
Atmosp = Atmosphere

Support was established for Hypothesis 1, which stated that customer loyalty would be positively related to customer satisfaction. Provider interaction was also positively related to customer loyalty and customer satisfaction in our model; thus support was established for Hypothesis 2 as well. In addition, as hypothesized hair quality was positively related to loyalty and satisfaction, which indicated support for Hypothesis 3. Support was also established for Hypotheses 4, 5 and 6, which stated that timeliness, scheduling, and atmosphere were positively related to both loyalty and satisfaction in the latent variable model.

Because all constructs were measured using self-reports, we examined whether common method variance was a serious issue. As recommended by Podsakoff and Organ (1986), Harman's one-factor test was performed. In this test, all survey items were entered together into an unrotated factor analysis and the results were examined. If substantial common method variance is present, then either a single factor would emerge or one general factor would account for most of the total

variance explained in the items (Podsakoff & Organ, 1986). After entering all items into the factor analysis model, eleven factors emerged from the analysis, and the first factor only accounted for 21.103 percent of the total variance. In addition, no general factor emerged from the factor analysis. Thus, common method variance was not deemed a serious issue in this study.

MEASURES OF MODEL FIT

Consistent with commonly prescribed procedures for evaluating structural equation models, we used multiple fit indices to assess overall model adequacy (Hair et al, 1998). The goodness-of-fit index (GFI) is a measure of absolute fit of the model by comparing the fitted model with the actual data, and ranges from 0-1. Values greater than 0.90 demonstrate that the model fits the data well (Hair et al., 2005).

The absolute fit measures, maximum likelihood ratio chi-square statistic (²) and the goodness-of-fit index (GFI), provide a measure of the extent to which the covariance matrix estimated by the hypothesized model reproduces the observed covariance matrix (James & Brett, 1984). In addition, the root mean square error of approximation (RMSEA) was considered as it provides an estimate of the measurement error. Another fit index, the Tucker-Lewis index (TLI, also known as the Non-Normed Fit Index), was used to assess model fit; the TLI assesses a penalty for adding additional parameters to the model. The normed fit index (NFI) provides information about how much better the model fits than a baseline model, rather than as a sole function of the difference between the reproduced and observed covariance matrices (Bentler & Bonett, 1980). The comparative fit index (CFI) has similar attributes to the NFI and compares the predicted covariance matrix to the observed covariance matrix and is least affected by sample size.

TEST OF THE MODEL

The two-step approach to structural equation modeling was employed (Anderson & Gerbing, 1988). First, the measurement model was inspected for satisfactory fit indices. After establishing satisfactory model fit, a mediation model was fitted to the data. Thereafter, the structural coefficients were interpreted.

The measurement model or baseline had acceptable fit indices (see Table 2). That is, the Chi-square statistic was at its minimum, and the p-value was nonsignificant. The GFI was above its recommended threshold level of 0.90 (Hair et al., 2005), and the root mean square error of approximation (RMSEA) was less than 0.08, indicative of an acceptable model (Steiger & Lind, 1980). The Chi-square divided by the degrees of freedom coefficient was less than three, which indicates acceptable model fit (Arbuckle & Wothke, 1995). The CFI, NFI, and TLI all indicated an acceptable fit of the model to the data.

Table 2: Fit Indices for the Hair Care Measurement Model.

Model	χ^2(df)	p-value	χ^2/df	RMSEA	GFI	TLI	NFI	CFI
Baseline	274.052(148)	0.119	1.852	.047	.934	.967	.947	.975
W/mediation	268.404(143)	0.081	1.877	.048	.935	.966	.948	.975

Statistics are based on a sample of 420 respondents.
Degrees of freedom are in parentheses after the Chi-square value.
RMSEA = Root mean square error of approximation.
GFI = Goodness-of-fit index
TLI = Tucker Lewis index (Non-Normed Fit index)
NFI = Normed Fit index
CFI = Comparative Fit index
df = Degrees of freedom

Table 3 displays the structural coefficients for the hair care model without mediation. Hair quality, scheduling, and customer satisfaction positively influenced customer loyalty. However, provider interaction, timeliness, and atmosphere were not significant predictors of customer loyalty in our model.

Table 3: Unstandardized Structural Coefficients for the Hair Care Model

Parameter	Path Coefficient	T-value	SMC
Customer Satisfaction			80.1%
Provider Interaction	.04	0.785	
Hair Quality	.52	10.34*	
Timeliness	.01	0.595	
Scheduling	.11	2.772*	
Atmosphere	.02	0.403	
Customer Loyalty			92.2%
Customer Satisfaction	1.12	13.08*	

Statistics are based on a sample of 420 respondents.
These are the endogenous variables in the model; the exogenous variables are listed underneath.
*Significant at the 0.05 level.
SMC = Squared multiple correlation.

MEDIATION MODEL

Judd and Kenny (1981) and Baron and Kenny (1986) advanced that structural equation modeling is the preferred data analytic strategic when conducting mediation tests involving latent constructs. Following the four steps outlined by these aforementioned authors, we modified our baseline to include five new paths to test whether customer satisfaction mediated the relationship between the antecedents (provider interaction, hair quality, timeliness, scheduling, and atmosphere) and customer loyalty. That is, we added direct paths from the antecedents in Figure 1 to customer loyalty. As shown in Table 2, the mediation model had acceptable fit indices.

Full mediation was established for both hair quality and scheduling. Thus support was established for H7c and H7d. The path from hair quality to customer satisfaction was significant, and the path from the mediator (customer satisfaction) to the endogenous variable (customer loyalty) was also significant. However, the path from hair quality to customer loyalty was reduced and non-significant (?= .282, p= .181) in the mediation model, indicating full or complete mediation. For scheduling, the results were similar; that is, the path from scheduling to customer satisfaction was significant, but the path from scheduling to customer loyalty was reduced and non-significant (?= .052, p= .214), indicating complete mediation. Customer satisfaction did not mediate the relationship between provider interaction, timeliness, atmosphere and customer loyalty in our model.

GENDER DIFFERENCES

Table 4 presents the gender differences across the nomological network. For males, only hair quality positively influenced customer satisfaction. However, provider interaction, timeliness, scheduling and atmosphere were not predictors of customer satisfaction. The customer satisfaction of males significantly influenced customer loyalty.

For females, hair quality and scheduling influenced customer satisfaction. Provider interaction, timeliness and atmosphere were not significant predictors of customer satisfaction. Like the males, customer satisfaction of females predicted their customer loyalty.

The squared multiple correlations for customer loyalty and customer satisfaction are presented in Table 4. It appears that the female and male models explained approximately the same amount of variance.

Table 4: Unstandardized Structural Coefficients by Gender for the Hair Care Model

Parameter	Coefficient (Males)	Coefficient (Females)	SMC
Customer Satisfaction			
Provider Interaction	-.03(-0.23)	.08(1.41)	Males =81.2%
Hair Quality	.62(7.24) **	.43(6.80) **	Females=81.5 %

Table 4: Unstandardized Structural Coefficients by Gender for the Hair Care Model			
Parameter	Coefficient (Males)	Coefficient (Females)	SMC
Timeliness	.02(0.32)	.01(0.59)	
Scheduling	.09(1.45)	.14(2.50)**	
Atmosphere	.05(0.38)	.04(0.74)	
Customer Loyalty			
Satisfaction	.92(8.01) **	1.23(10.53)**	Males =92.8%
			Females=91.4%

Statistics are based on a sample of 420 (155 males and 265 females).
The t-values are in parentheses directly after the path coefficients.
*Significant at the 0.10 level.
**Significant at the 0.05 level.
SMC = Squared multiple correlation.

DISCUSSION

Consistent with the literature (Campbell & Davis, 2006; Gremler & Gwinner, 2000; Morgan & Hunt, 1994; Oliver, 1999), we found that the antecedents (provider interaction, hair quality, timeliness, scheduling, and atmosphere) and loyalty and satisfaction were positively related in our model. As expected and consistent with the literature, loyalty was positively related to satisfaction (Bolton & Lemon, 1999). We also found that hair quality, scheduling, and satisfaction positively influenced loyalty. Provider interaction, timeliness, and atmosphere were not significant predictors of loyalty. It therefore appears that customers do not believe that these characteristics of the hair care providers were as important as quality and scheduling.

We found that satisfaction mediated the relationship between customer loyalty and two antecedents, hair quality and scheduling. Thus, the level of satisfaction may enhance the hair quality-loyalty and scheduling-loyalty relationships among customers. Satisfaction did not mediate the relationship between loyalty and the other antecedents (provider interaction, timeliness, and atmosphere) in the model.

For males only hair quality positively influenced customer satisfaction, so it appears that males may be willing to wait a while for a quality haircut. As expected, the customer satisfaction of males influenced loyalty. In contrast, for females both hair quality and scheduling influenced their customer satisfaction; like males, the customer satisfaction of females predicted their loyalty to the hair care provider. Apparently, female customers need hair care providers to provide quality service with a convenient scheduling process for them to be satisfied.

In today's fast-paced world, appearance is important to both men and women. Business Franchise reported that 82 % of men care about their appearance in terms of regular professional

grooming, which creates a market segment of men willing to pay substantially higher prices for a more elaborated process and carves a niche in the market through structural differentiation (Shostack, 2005).

Hair care providers are well aware of the importance of great service and customer loyalty; however there is little empirical information from the customer's point of view. In the hair care profession it seems that verbal feedback is more readily accepted as opposed to more formal surveys and questionnaires, which can be inferred by the dearth of literature with that type of information. This study provides empirical evidence demonstrating the importance of hair quality for both men and women and scheduling for women.

CONCLUSION

Using structural equation modeling, the current research investigated the mediating effects of customer satisfaction on the relationship between customer loyalty and its antecedents. Satisfaction mediated the relationship between customer loyalty and two of its antecedents, hair quality and scheduling in our model. Customer satisfaction did not mediate the relationship between customer loyalty and three other antecedents (provider interaction, timeliness, and atmosphere).

This study represents one of the first to examine the mediator effects of customer satisfaction on the relationship between customer loyalty and its antecedents in the hair care provider industry. Another contribution of this study is that it provides additional evidence on the importance of examining mediator models, which may provide a sensitivity analysis at the individual level.

Findings from this study have important and practical implications. Barbershop and salon owners may need to consider hair quality and scheduling in order to better satisfy customers, generate customer loyalty, and maximize profits. In addition, to be satisfied our findings indicate that women customers are more concerned with quality and scheduling flexibility, whereas men customers are primarily concerned with quality. The hair care service industry is evolving in a very dynamic market and client retention is critical. Identifying the primary factors that encourage customer satisfaction, loyalty and retention can make a very important contribution to the financial success of hair service provider organizations as well as individual hair care professionals.

As is true of most research, the current research has some limitations. First, the cross-sectional design of the study does not allow for causal inferences. Another limitation of the study was that all data were collected via self-report measures, which may lead to the problem of common method bias. However, the Harmon's one-factor test did not indicate a problem with common method variance.

A future area of inquiry would be to compare multi-sample latent variable models. Specifically, studies are needed that compare and contrast robust samples of ethic group members in this area of research. We also believe that longitudinal designs are needed in this area to examine the behavior of these constructs and whether they wax or wane over time.

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AN ANALYSIS OF FACTORS AFFECTING LIFE INSURANCE AGENT SALES PERFORMANCE

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ABSTRACT

Several factors affecting life insurance agent production were tested in an effort to produce a predictive model of agent and agency production. Surprisingly, formal education, professional education, and training showed no affect on production. The number of policyholders and smaller management span of control both proved predictive. The most important predictors, however, proved to be prior performance.

The purpose of this study is to analyze factors commonly believed to affect life insurance agent production. The resultant model will not only provide a method for forecasting production by estimating parameters for the factors identified as significant, but will hopefully also provide insights about the system of production that may stimulate improvements in productivity and the related dilemma of retention. This study will also test many of the factors commonly used within the insurance industry to select new agents. A final objective is to stimulate further research and experiment into the system of delivering financial services and products.

Annual production forecasts are generally based on some flat percentage of increase over the results of the concluding year, and expectations about new recruit production are based on a combination of psychological and demographic factors. While these efforts have been aimed at improving productivity and reducing turnover, the industry has seen little improvement on either front.

A full model for agent production would at the very least include three groups of factors for measurement: a group of psychological factors, a group of demographic factors, and a group of factors reflecting the economy of the sales territory. It is my intention to focus only on those demographic factors currently believed by many in the industry to contribute positively to production levels.

PRIOR INDUSTRY RESEARCH

Published industry research, performed by the Life Insurance Marketing and Research Association, Inc., (LIMRA) has served to define the extent of the problem. Agent retention is measured by the percentage of agents hired in a given calendar year surviving into succeeding years. Four-year retention, for example, is approximately 11% for home service companies and 17% for ordinary companies. For the year 1991, median production for ordinary agents, measured by sales

commissions per survivor, was $18,215. Other research, related to the identification and measurement of factors such as this study, is not published by LIMRA. (LIMRA has developed a model for measuring the potential of new recruits from which it has developed an aptitude battery which it markets as The Career Profile.)

OTHER RESEARCH

Much general research has been done attempting to isolate the determinants of a salesperson's performance. Churchill, Ford, Hartley, and Walker, (1985) explored role variables, skill, motivation, personal factors, aptitude, and organizational/ environmental factors. This meta-analysis based on 116 studies found that, on average, single predictors of sales performance accounted for less than 4% of the variation in salesperson performance. Aptitude accounted for less than 2%, skill levels slightly more than 7%, motivation accounted for 6.6%, role perceptions was by far the best predictor, accounting for as much as 14% of the variation in performance, personal variables (age, height, sex, etc.) accounted for 2.6%, while organizational and environmental factors accounted for about 1%. They concluded that personal characteristics, while important, are not as important as the influencable factors such as training, company policies, skill levels, motivation, etc.

Ryans and Weinberg (1979) studied company marketing activities, salesforce policies and procedures, field sales manager and salesperson characteristics, territory characteristics, and competition as the six factors affecting sales response. This study focused on objective, non-psychological variables and concluded that individual characteristics, span of control, and territory potential are indeed good predictors of sales. The other factors proved difficult to operationalize and the results were, at best, non-conclusive. Other studies, e.g. Bush, Bush, Ortinau, and Hair (1990); have included behavior-based measurements, focusing on behaviors of retail sales people that contribute to their success (as measured by managed appraisal).

Cravens, Ingram, LaForge, and Young, (1993), explored the relationships between compensation/control systems and performance. Their results indicate that the type of control system, i.e., management control versus commission control, is correlated to several measures of success. Sales performance was more affected by commission control than by management control (the coefficients were .19 vs. .12, respectively), however, in customer satisfaction, the relationships were reversed (the coefficients were .05 vs. .13). Lamont and Lundstrom (1977) studied a combination of personality attributes (dominance, endurance, social recognition, empathy, ego strength) and personal characteristics (age, height, weight, formal education, outside activities, civic and professional organizations) as predictors for sales success. Their results indicated that personality variables were more successful in predicting success as evaluated by management ratings, while personal characteristics were better predictors of sales results. Using sales results as the dependent variable (instead of management ratings) the height of the salesrep and membership in civic and professional organizations were the most commonly significant predictors.

In a meta-analytic study of personality predictors of job performance, Tett, Jackson, and Rothstein (1991) generally supported the use of personality measures in selection. Even though significant, the amount of variation explained by these factors was small (overall relation between personality and job performance -- corrected = .24) and the measure of performance was largely a subjective performance rating.

In a study predicting sales performance of life insurance agents, Bluen, Barling, and Burns (1990) found the number of policies sold correlated with age ($r = .06$ ns), tenure ($r = .39$ $p < .01$), education ($r = -.03$ ns) the impatience-irritability component of type A behavior ($r = .09$ ns), the achievement strivings component of type A behavior ($r = .18$ $p < .05$). Tenure correlated with age ($r = .43$ $p < .01$). In a non research based exploration of the nature of leadership, Kirkpatrick and Locke (1991) focused on the traits of drive, leadership-motivation, honesty and integrity, self-confidence, cognitive ability, knowledge of the business, and an 'other' category that included creativity, charisma and flexibility. While the focus here was not on sales per se, the traits discussed and the concept of leadership are certainly sales enhancers.

Self-monitoring, the personality trait which, it is theorized, would allow sales reps to adapt to varying sales situations by responding to social cues as to what is expected or appropriate, is yet another construct yielding quite different predictive results. While Caldwell and O'Reilly (1982) found self monitoring positively related to job performance, Dubinsky and Hartley (1986) found self-monitoring unrelated to performance.

For the sake of parsimony, in order to avoid the difficulties of operationalizing conceptually complex constructs, and in order to avoid data-gathering difficulties, this study focuses only on objective characteristics.

The Chartered Life Underwriter (CLU) and Chartered Financial Consultant (ChFC) professional designations are largely educationally based and are earned through a college-level curriculum. The Life Underwriter Training Council (LUTC) provides education and training courses which are more experientially based. The National Association of Securities Dealers (NASD) is the Self Regulatory Organization responsible for licensing securities dealers.

ANALYTICAL TOOLS/METHODS

Data was collected by contacting agencies in the local area and completing a questionnaire collecting the required data for each agent contracted and having at least twelve months under contract. Seven local agencies participated by completing the questionnaire for their Shreveport-area agents. Commonwealth Life Insurance Company and The Prudential (District) agencies provided the home service data. Business Men's Assurance, The Equitable Life Assurance Society, Mutual of New York, Metropolitan Life, and Lincoln National Life Insurance provided data for the ordinary sample.

While the data requested is straightforward, some of it was not readily available in the form requested. The number of policyholders with policies written by and assigned to the agent, an important part of this study, was difficult to measure. For example, ordinary agents are generally not assigned policies to service. Instead "orphans" are given to agents as sales leads on an irregular basis. The number of policyholders with policies written by the agent may be available but may not account for those who have moved far from the writing agent (and who would therefore be of little value in projecting sales). Home service agents, on the other hand, do not necessarily service policyholders according to the writing agent, but rather according to geographic location. An agent may sell to a policyholder living in a particular neighborhood. If that policyholder should subsequently move to another part of town the agent will have the policyholder reassigned to the agent responsible for that neighborhood and may not service or sell to that policyholder in the future. In the home service system the assigned policyholders are tracked according to their residence, not by the writing agent. In either case the number is likely to reflect the number of policies which is not necessarily the same thing as policyholders. In any case the resulting number should prove representative of the real number and useful for the purpose of forecasting the resultant production.

ANALYSIS

It was expected that each item in the list above would be positively correlated to the productivity measure chosen (number of sales or total sales commissions). Education factors: professional education, skill education, education level, and NASD registration, however, will not predict production as strongly as maturity factors. The maturity factors: age, number of years in the community, and number of years with the company, experience, and the number of policyholders sold by the agent will produce the strongest single-factor predictor relationships. An interactive term, experience and professional education, will also produce a comparatively large predictor value. Family factors: marital status, the number of dependents, and a working spouse will produce the second weakest group of predictor variables. The number of specialists and the managers-to-agents ratio will produce the weakest group of predictors.

RESULTS

Data analysis provided many surprises. Using the stepwise procedure with an entry-level significance of 0.1 and the same level for a variable to remain in the model, several factors revealed parameter estimates either opposite to the expected direction or of such magnitude as to test credulity. Industry professional education, i.e., the number of CLU, ChFC parts completed, and property casualty licensing showed negative coefficients while NASD licensing showed an ultra high coefficient. The number of policyholders written showed a positive correlation with production, but not the number of policyholders assigned.

In an attempt to make sense of the data several transformations were made. Industry education and training, certainly independent measures, were summed and a new independent variable, edtr, was used in their place. Likewise the number of policyholders assigned and written were summed and a single variable, the number of policyholders, ph, was used instead. At the same time the number of agents in an agency was divided by the sum of managers and specialists and a new span of control variable, management ratio, mgrratio, was used to replace the three independent variables it reflects. Education, ed, a variable summing the years of formal education with the education and training numbers for industry education, was also introduced.

Education and training, edtr, became positive, as expected, but lost all significance (Pr > |T| = 0.89. Education, ed, had a negative coefficient but was likewise not significant. The total number of policyholders did show high significance (Pr>|T|= 0.0003) as expected. The other problems showed no improvement.

After a review of the data and the results thus far, it was decided that one difficulty might lie in the use of a common description, or model parameters, for two separate systems. Home service agents and ordinary agents serve different markets, are managed differently, licensed differently, are compensated and trained differently. Why then should the same factors be significant for each and why should the common factors have similar coefficients? To get a better measure of the differences between the two systems, the income distributions for the combined data and for each company type were displayed as a histogram. While none of the distributions were normal, the combined chart reflected a broadened central tendency as one might expect in the case where two distributions were overlaid and additive, while the separate distributions were much more nearly normal in appearance. The mean commissions for the combined data was $28,302 whereas the mean for home service alone was $13,592 and the mean for ordinary alone was $35,911. In order to further compare the two systems, a single factor ANOVA was done comparing the means. With an F of 8.606 and a P-value of 0.004 the two are surely different.

Continuing the analysis separately for home service and ordinary agents produced results more within the range expected. Starting again for home service agents with stepwise regression as before, retaining the new variables in order to reduce the number being tested against the reduced data set, produced significance for total policyholders (Pr > F = 0.0009) and for being property-casualty licensed (Pr > F = 0.0084). Because the combined education and training variable failed to achieve significance, the model was rerun using the original separate variables for education, ed, and for training, tr. This produced significance for policyholders (Pr > F = 0.0009), for being property-casualty licensed (Pr > F = 0.0084) and for LUTC training (Pr > F = 0.0302).

The resulting model then is:

commissions = -$7,578 + $14.502 (total policyholders) + $13,788 (if P&C licensed) + $1,651(# LUTC parts completed).

This model was significant (Pr > F = 0.0001) and produced an R2 = 0.5703 . To put this in perspective this model was compared with a naive model based solely on the prior year's production. This naive model became:

commissions = $5,353.21 + 0.4887 (last year's commissions).
This model was significant (Pr > F = 0.0001) and produced an R2 = 0.4517.

When running the regression against the dependent variable "number of sales," instead of commissions, the home service sample produced only one significant factor: the total number of policyholders. This factor was very significant (pr > F = 0.0001) and the resulting model was:
number of sales = 17.44 + 0.0755(the total # of policyholders)

For ordinary agencies the stepwise regression for commission produced significance for total policyholders (Pr > F = 0.0001), and for education level (Pr > F = 0.0029). Thus the final model became:

commissions = -$12,614 + $34.71(total policyholders) + $8,069.55(years of college).
This model was significant (Pr > F = 0.0002) and produced an R2 = 0.2726.
[The negative intercept term has been minimized by correcting the education level to reflect education beyond high school].

For comparison purposes a naive model based solely on last year's production was also run. This model:

commissions = $12,675 - 154(# last year's sales) + last year's commissions was significant (Pr > F = 0.0001) and produced an R2 = 0.7951 . Not bad at all for prediction but not very revealing.

The ordinary agents' regression on number of sales, however, produced six significant factors. Experience (Pr > F = .0753), manager ratio (Pr > F = .0011), length of residence in the community (Pr > F = .0595), holding a property-casualty license (Pr > F = .0498), and number of parts of CLU/ChFC completed (Pr > F = .0216), were all significant but the coefficients were negative, and total number of policyholders (Pr > F = .0001) was also significant. The full model, then is:

number of sales = 120 - 2(years of experience) -6.4(agents per manager) - 0.7(years of residence in the community) -3(# of CLU/ChFC parts completed) -36(if P&C licensed) + 0.08(total number of policyholders)

The negative coefficients suggest counterintuitive correlations among the variables. The negative coefficient for management ratio is as expected, i.e., as the span of control increases, the number of sales decreases. The negative coefficients for experience, length of residence in the community, and number of parts of CLU/ChFC all suggest that these individuals make fewer sales probably because they make larger sales and do not need, or do not have the time, to make larger numbers of sales. The negative coefficient for being property/casualty licensed is probably an artifact of this data set, i.e., most of these companies do not sell property/casualty insurance, therefore the total number of sales would not include property/casualty sales for other companies while certainly the time trade-off would decrease primary company sales.

This model is significant (Pr > F = 0.0001) with an R2 of 0.4451 . This compares with a naive model of:

number of sales =27 + .76(last year's sales) -.00016(last year's commissions)

This naive model is significant (Pr > F = 0.0001) with an R2 of 0.5563 .

DISCUSSION

The ability to develop an R2 for the various models ranging from .27 to .57 is seen as a very positive sign for this research. Keeping in mind that no psychology measurements or economic measurements were included, one might anticipate a full model R2 comparable to, or even exceeding the R2 of the naive model.

The real importance here is the significance of policyholders in production of both sales and commissions. In both the home-service sample and the ordinary agents sample the single most significant factor for both the number of sales and the total sales commission produced, was the total number of policyholders. This could mean that "orphans" could be permanently assigned to an agent, receive a better continuity of service, and the agent's performance would improve at the same time.

Education level, the number of years of formal education, was positively correlated with the number of parts of CLU/ChFC (r = .12) and negatively correlated with the number of parts of LUTC completed. Apparently college graduates are more comfortable with the CLU format, or agents are being guided into CLU or LUTC by management based on their educational attainment. It is notable that LUTC appeared in the regression model for home service agents and CLU/ChFC appeared in the model for ordinary agents.

Also interesting was the negative correlation between the number of agents in an agency and policyholders assigned, CLU/ChFC parts completed and LUTC parts completed. This could be a result of more recruiting activity producing a less experienced agency force with fewer "orphans" for each new agent, or it could perhaps be a result of the diffusion of management's focus on these items as a result of the larger number of agents taking more of their time and attention.

INTENDED USE

The strength of the coefficient for education and training and the lack of, or negative, correlation of experience with production is problematic. Perhaps a broader data set would allow a definition of these coefficients. The number of policyholders assigned and written revealed a strongly positive correlation between number of years with the company and the length of time in the community. The usefulness of the education correlation should be obvious. Encouraging education and selecting people who are predisposed to more thoroughly learning about the design and use of their product could become even a stronger focus and an important long-term strategy. At the same time if mature individuals can be assigned policies and achieve productivity even close to agents who have years of experience and a client-base well established, companies could develop strategies to not only improve production but also to better serve the block of policyholders they already have. This would likely entail developing different recruiting, training and compensation strategies.

FUTURE RESEARCH

Many questions are raised by the data set utilized. For example, is the separation of home service and ordinary data, used here to allow analysis, necessary for the industry overall, or was it simply a unique character of this data set. Once a reasonably stable model is established, the relationships should be tested anew for their relevance to a model predicting new agent longevity.

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E-COMMERCE IN NON-METRO REGIONS: ON-LINE PURCHASES AND IMPLICATIONS FOR BUSINESSES

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ABSTRACT

Descriptive studies of Internet purchasers profile the average purchaser as a resident of metropolitan area. While concepts such as "digital divide" have been used to explain the lack of Internet transactions in non-metro areas, little or no research has explored the relevance of product-specific variables in explaining Internet transactions. This research attempts to bridge this gap. Specifically, the "FCB grid" is used to analyze Internet purchases in non-metro Illinois. Based on these analyses, implications for both virtual and brick-and-mortar businesses in non-metro regions are discussed. A key finding is that Internet transactions predominantly deal with "functional" products and speed of Internet connection doesn't influence residents' quality of life perceptions.

INTRODUCTION

Internet penetration among adult population in the US, people 18 years of age and above, is estimated at 73% or 147 million people (Madden, 2006). While rural adults lag behind urban and suburban adults in Internet usage as much as 8% (Horrigan and Murray, 2006), there is general consensus that Internet can improve perceptions about quality of life (Madden, 2006).

Research also suggests that while rural users pursue many of the same online activities as their urban / suburban counterparts, they are less likely to engage in transactions (Bell, Reddy & Rainie, 2004). One reason could be that non-metro residents lack high-speed Internet facilities at home. In fact, Horrigan (2006) highlights a 15% gap in home broadband connection between rural and other residents.

Another explanation for less use of the Internet by rural residents could be that they, being older, are more loyal to local land-based businesses with which they are more familiar and comfortable in transactions. In these cases, rural residents may buy essential, day-to-day products locally from land-based businesses and purchase hard to access products such as software, books, and plane tickets on-line.

The literature generally lacks an analysis, rather than description, of Internet purchases by non-metro residents. This study contributes to the literature by addressing the following questions:

i) Can the Internet purchasing behavior of non-metro residents be explained by type of good or service selected?

ii) Is quality of life in non-metro communities influenced by access to high-speed Internet at home and, if so, how?

THEORETICAL FOUNDATIONS AND RESEARCH HYPOTHESES

Purchase Behavior

It is a well-established fact that simple descriptive matrices, such as the Boston's Consulting Group's growth share matrix, are often used by business managers to analyze or predict business units' performance. Witness the popularity of "grid" analyses and prescriptions in publications such as the *Harvard Business Review* that are often read by business managers.

One such grid analysis that summarizes four prominent theories of consumer behavior: utility maximizing economic theory, affective or emotions-laden behavioral theory, social theory, and stimulus-response psychology, is the Foote, Cone & Belding (FCB) matrix (Vaughn, 1986; Figure 1). The FCB matrix contends that purchase behavior varies for high versus low involvement products and those which require predominantly thinking or feeling judgment.

Involvement is defined as a consumer's perceived riskiness of the purchase; a low risk purchase is categorized as low involvement and a "risky" purchase as high involvement (Rossiter, Percy & Donovan, 1991). The "think" and "feel" dimensions relate to motives for purchasing. Specifically, "thinking" products tend to solve or remove a problem; for example, Aspirin removes aches and pains. By contrast, "feeling goods" such as food and sweets stimulate and satisfy one's taste sensations and address sensory enjoyment needs.

While space does not permit an explanation of all four theories included in FCB, the grid has been validated in 24 different nations, with general agreement among marketers that products such as shown in Figure 1, on average, represent each of the four cells.

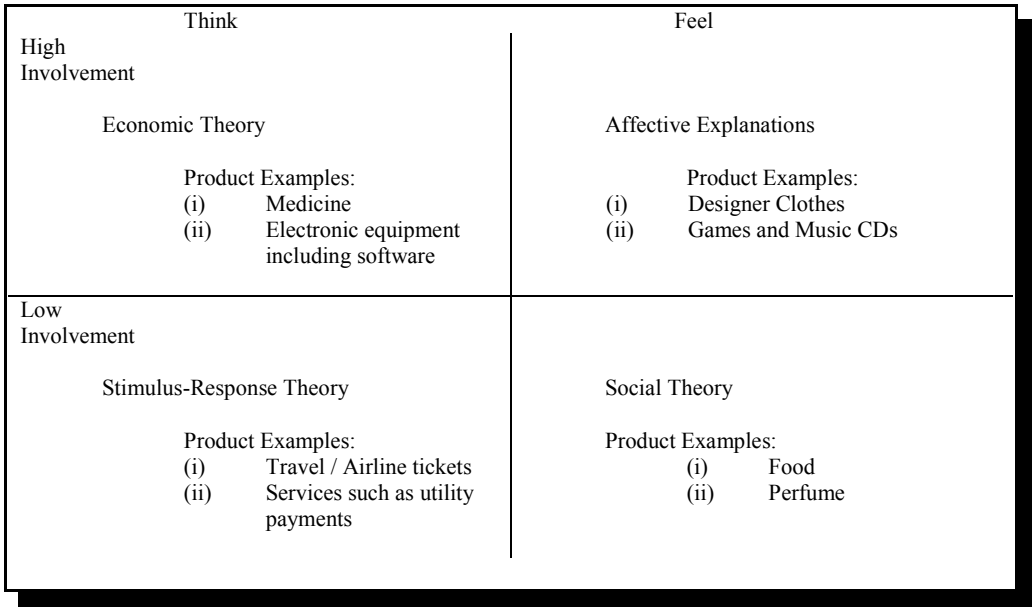
How can the FCB matrix explain and predict Internet purchase behavior? The Internet can provide both iconic (visual; relevant for "feeling" products; mainly used to elicit emotions) and echoic (oral; relevant for "thinking" products) learning in consumers. However personal income, or financial resources, strongly affects how much non-metro residents buy on the Internet. On this topic, it is well-documented that rural Americans, on average, have lower incomes than people living in metro areas (Horrigan & Murray 2006).

Since financial resources often determine, or limit, consumption of "feeling" goods, we hypothesize that:

H_1: Non-metro residents will purchase more "thinking" goods than "feeling" goods on-line.

From the FCB matrix, these are likely to be goods that do not require close inspection, touch, or handling.

Figure 1: FCB Grid



By the same token, since "risky" or high involvement purchases tend to be expensive purchases, we posit that:

H_2: Non-metro residents will purchase more low involvement than high involvement products over the Internet.

Having highlighted the relevance of FCB grid in explaining Internet purchases, we now turn to delineating the relationship between high-speed Internet connection and quality of life.

Quality of Life

Quality of life (QOL) is a higher-order construct that encompasses concepts such as work satisfaction, and family-life satisfaction (McCrea et al, 2006). This paper examines residents' perceptions about satisfaction with various facets of their community: community quality of life. Briefly, a community provides public necessities such as law enforcement, water, sewage, and other services. High-speed Internet is part of these "essential" services. In the next section, we use this

assumption to theorize the effects of high-speed Internet connection on residents' community quality of life perceptions.

High-speed Internet connection at homes is expected to reach 50% this year (Horrigan, 2007) after only nine years to achieve this market-penetration rate. In contrast, it took 15 years for cell phones to achieve the 50% market penetration. Given this rapid diffusion of home broadband technology, it is reasonable for rural Americans to expect their community to have broadband connection. However, as aptly observed by Bell, Reddy & Rainie (2004), there is an economic disincentive for building broadband infrastructure in rural areas; there are not enough paying users to overcome the initial investment. Hence, it is likely that many rural communities are not broadband enabled: a recent survey suggests that 27% of non-metro regions have no broadband access (Pew Internet Project, 2004).

According to cognitive dissonance theory (Festinger, 1957), an unconfirmed expectancy; in our case, the lack of high-speed Internet connection in the community, would create a state of "psychological discomfort" for the non-metro resident. This is because the reality contradicts the resident's expectation. In this situation, the resident stimulated to reduce the psychological tension lower her perceptions about quality of life in the community. In fact, research suggests that the resident would exaggerate or magnify the disparity (Hovland et al, 1957). This line of reasoning leads to the following prediction:

H_3: Availability of high speed Internet connection at home positively affects quality of life perceptions.

METHODOLOGY

Data from the Illinois Rural Life Panel 2000 and the Illinois Rural Life Poll 2005 are used to address the research questions. The rural-life surveys, conducted by the Illinois Institute for Rural Affairs, target non-metro residents and include questions about quality of life issues, public services, and Internet usage behavior. The 2000 survey, mailed to 4,877 residents, had a response rate of 31% or 1510 responses. The 2005 mail survey targeted 2000 residents and had a 32% response rate; had 640 usable responses.

Responses to the questions given in Table 1 are analyzed to profile the Internet purchases of non-metro residents and to examine hypotheses 1 and 2. The "Table SALT" methodology (Schenker, et. al. 2007) which combines frequency table (Table) with the stem-and-leaf plot (stem-and-leaf type or SALT) was used. Since responses are simply counts, statistical tests concerning proportions were used to test hypotheses 1 and 2.

Table 1: Measures of Internet Purchases: Questions from Illinois Rural Life Panel – 2000, and Illinois Rural Life Poll – 2005	
The question read, "Please indicate which of the following items you have purchased in the last six months using the Internet".	
Item	Check All That Apply
Airline tickets	☐
Books	☐
Clothes	☐
Computer / Electronic equipment	☐
Software	☐
Drugs/Pharmaceuticals/Medicine	☐
Games/Music CD's	☐
Food items	☐
Services (Licenses)	☐
Auctions (eBay)	☐

The relationship between high-speed Internet connection and quality of life in the community is assessed using an index constructed as a measure of high speed Internet connection. Specifically, the 2005 Poll asked respondents to specify the type of Internet connections in their home. The response categories were: dial-up, wireless, DSL, and cable. Table 2, columns 2 and 3, list the data download and upload speed of these connections. Based on this information, we assigned scale values for the connections (Table 2, column 4).

Table 2: Measure for High Speed Internet Connection			
Type of Internet Connection	Download Speed	Upload Speed	Scale Value
Dial-Up	56kbps	28 to 30kbps	1
Wireless	More than 200kbps	At least 200kbps	2
DSL	768kbps to 6mbps	128 to 768kbps	3
Cable	4mbps to 15mbps	384kbps to 1.5mbps	4
Note: Information about connection speed was obtained from: www.high-speed-internet-access-guide.com			

The QOL measure is a perceptual measure from the 2005 Illinois Rural Life Poll.

Question	Response Categories				
During the past five years has the quality of life in your community become ……..	Much Worse (1)	Worse (2)	Stayed the Same (3)	Better (4)	Much Better (5)

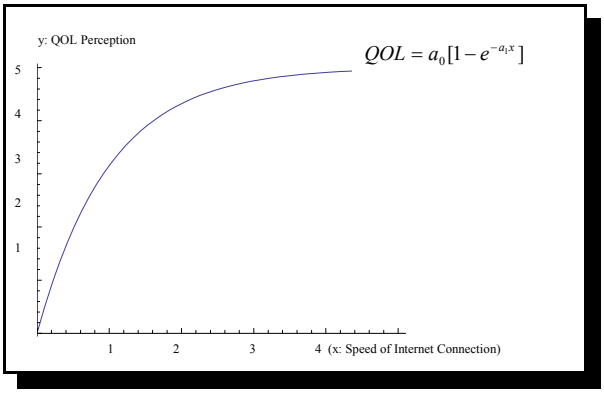
The hypothesis, "the higher the speed of Internet connection, the higher the quality of life", was empirically examined using an exponential model of the form:

$$QOL = a_0[1 - e^{-a_1 x}]$$

Where, QOL = Quality of life in the community;
a_0 = Upper limit for QOL, and
x = Speed of Internet connection

This model formulation relaxes the "constant returns to scale" assumption of the linear model (Figure 2). Specifically, the model has regions of increasing, decreasing, and constant returns to scale. In addition, it captures the threshold and the saturation effects that many theorists believe exist in predictors of QOL (Bognar, 2005). To elaborate, consider a person with a low-speed dial-up Internet connection (28kbps). It is likely that she will find a gradual increase in Internet connection speed, to, say, up to 200kbps level, increasingly satisfactory (increasing returns to "x"). Now, the same person may feel equally satisfied with connection speeds in the range of 200kbps to 768kbps (constant returns to scale). Speeds above 768kbps to 2mbps may produce decreasing satisfaction (decreasing returns to "x"). It is also reasonable to assume that at some point in time, increases in Internet speed will not produce any satisfaction (saturation effect). The threshold for QOL highlights the fact Internet adds to an already existing, base level of QOL.

Figure 2: Relationship between Quality of Life and Speed of Internet Connection



Since $a_0 = 5$ in the QOL measure, the model reduces to:

$$QOL^* = \frac{a_0 - QOL}{a_0} = e^{a_1 x}$$

which can be expressed as:

$$\ln QOL^* = a_1 x$$

The model was calibrated using least-squares procedures.

RESULTS

Figure 3 provides frequencies with tallies of the 2000 and 2005 purchases, replacing counts. The use of tallies not only facilitates visual processing of information, but also provides information about the "year of activity"; note that the tally symbols "0" represent year 2000 and "5" denote 2005.

The Table SALT display (Figure 3) reveals that books were the most often purchased product, followed by airline tickets, and clothes. While purchases of electronics, and software decreased in 2005, purchases of games and music CDs increased.

Figure 3: Tallies of Internet Purchases during 2000 and 2005 Classified Using FCB Grid (Tally Codes: 0 = 2000 and 5 = 2005; *One Tally Mark Represents 5 counts*)

Products Classified on the Basis of Involvement	Tallies (collections of values)
High Involvement, Thinking Products:	
(i) Medicine	00000055555
(ii) Electronics	00000000000000000555555555555
(iii) Software	00000000000000000000055555555
High Involvement, Feeling Products:	
(i) Clothes	00000000000005555555555555555555
(ii) Games and music CDs	00000005555555555555555555
Low Involvement, Thinking Products:	
(i) Travel / Airline tickets	00000000000000000555555555555555555
(ii) Services (licenses)	55555
(iii) Auctions	5555555555555
(iv) Books	000000000000000000000000000055555555555555555
Low Involvement, Feeling Products:	
(i) Food	0000555

Do the findings support hypotheses 1 and 2 in Figure 3? H_1 predicts more "thinking" product purchases. Of the 1169 purchases during 2000 and 2005, a majority involves "thinking" type products: 72% or 841 of the total purchases were of the "problem-solving" type. These purchases are not chance happenings. The binomial test validates this conclusion (b(n;.5, x=841) results in z = 14.98, significant at the p<.05 level). Therefore, since the Internet has been used predominantly to purchase products that included medicines and software, we conclude that H_1 is supported by the "counts" data.

Hypothesis 2 (H_2) predicts more low involvement purchases but Figure 3 suggests the opposite. In fact, 55% or 643 of the 1169 purchases were of high involvement type-- products such as electronics, and clothing. Considering 51% as a majority number, then b(n;.51, 526) results in z = -3.84 (p<.05). This suggests that more high involvement product purchases have occurred during the two time periods rejecting H_2.

Hypothesis 3 predicts higher quality of life perceptions for people with high-speed, home internet connections. The parameter a_1 which highlights the relationship between the variables was statistically insignificant (Table 3). However, measurement errors could be involved. Specifically, "speed of Internet connection at home" is measured using an index number; an indirect approach to measurement. A perceptual measure could have returned a different result. For example, a direct questioning approach that requests respondents to state beliefs about the speed of home Internet connection could have resulted in a stronger relationship between the predictor and the criterion. Another reason for the insignificance could be that mediating variables such as "income" and "education" could have masked the relationship between quality of life and high speed Internet connection. Models were run including income, age, and other socioeconomic characteristics but without significant results. Thus, whatever the reason, further theorizing is needed to delineate the relationship.

Table 3: Empirical Estimates: The Exponential Model Relating Quality of Life With Speed of Internet Connection at Home

	Un-standardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta	B	Std. Error
Intercept	.885	.029		30.092	.000
Speed of Internet	.010	.016	.035	.648	.518

DISCUSSION AND IMPLICATIONS

Implications for E-Business

Explanations about e-commerce focus on two concepts: technology, and economics (Rosenbloom, 2003). Technology, especially information technology, is considered the "transformation" force for commerce. Virtually any transaction from ordering groceries to reading a book could be completed over the Net. But, as aptly observed by Morrison (2007), few people own an electronic book and not many consumers order groceries online (E-book, introduced in the year 2000, was expected to achieve at least $251 million in sales. Today, the market for e-book is so small that Forrester Research; a firm that tracks Internet sales, doesn't even track the category.)

"If technology was not a salient determinant of the e-commerce revolution, what else other than sheer economics (read "cost-savings") to explain its growth", touted analysts such as Carr (2000). The belief is that e-commerce would cut the need for physical infrastructures such as retail stores and producers could deal with consumers directly over the cyberspace thus bypassing expensive wholesalers or middle establishments. The expected "disintermediation" did not happen, however; instead, "infomediaries" such as Yahoo and eBay emerged to connect buyers and sellers.

Thus, we contend that it is not the technology and /or cost reductions that determine the competitiveness of e-business, but it is consumer behavior that is the salient predictor of e-commerce success and growth. Put simply, a demand side approach to e-commerce which requires a thorough understanding of online consumer behavior would provide competitive advantage to e-businesses (Korgaonkar & O'Leary, 2006).

Examining Internet purchases using the FCB grid was used as a start to understanding consumer behavior using the Internet. The results of the previous analyses suggest that products which solve a problem, "thinking" products in FCB terminology, are predominantly bought on-line. So on-line businesses dealing with consumers, commonly referred to as b2c business, then, *ceteris paribus*, can generate more sales by offering "thinking" products than "feeling" products. Note that this prescription is in line with the management principle of "selective concentration" which suggests that firms not try to be everything to everyone.

An e-business, like land-based businesses, must enhance customer value to gain competitive advantage. Essentially, value represents a trade-off of salient "get-and-give components" which are perceived as benefits and sacrifices respectively (Parasuraman, 1997). Research suggests that all factors, qualitative and quantitative, subjective and objective, that make up the complete shopping experience must be considered in order to understand what value means to a customer (Zeithaml, 1988). In a "distillation" of literature related to customer value, Chen and Dubinsky (2002) list the following factors as germane to enhancing customer value:

(i) *Relevant information:* Quick and easy access to useful information is one of the attractiveness or benefits of the Internet. However, customers may not want too much information. To make the on-line shopping a pleasant experience, e-businesses should offer pre-screened alternatives geared to customer need. A case in point is dress shirts sold by the online retailer Paul Fredrick (see www.PaulFredrick.com). This web site offers six collar choices, button or French cuff, and various sizes from which to choose.

(ii) *Ease-of-use of the web site*: E-business should provide consumers with a web site that makes users perceive a sense of control over the interaction. In addition, the web site should gain the interest of the customer thus making the shopping experience favorable.

(iii) *Customer Service*: Evidence exists to show that Internet shoppers have positive feelings about Web assistants who assist customers in Web shopping. A simple gesture such as a "hot linked" email address for customer assistance could influence Internet users to shop on-line more frequently.

Implications for Non-Metro, Small and Medium Brick-and-Mortar Retailers

While the implications for e-businesses to sell certain types of products are supported by previous analyses, less clear are approaches that can be used by small and medium-size businesses in small rural communities. While the advent of high-speed Internet is often welcomed as the future of a rural community, it may also mean a potential loss of business in some main street businesses selling traditional products. Loss of sales to e-businesses such as mail-order companies plus competition from regional shopping centers can mean store closures in these communities which are of special concern to elderly populations who are less mobile and probably less familiar with purchasing on the Internet.

So, what are some options for small main street stores? First, simply obtaining a web site without an increase in merchandise may provide more exposure but not have much effect on sales because the small store can not compete with large companies who offer more options as well as lower prices. They may also pay shipping on initial purchase or returns which reduces the delivered prices even more. Second, E-businesses, especially mail-order companies, may be open 24 hours per day compared with a traditional eight hour day in small retail stores.

One approach that seems to have worked is for stores to take on specialty lines such as running shoes and accessories. These stores offer specially designed merchandise which appeals to a special group of customers. The merchandise is not available in land-based stores so the competition is not intense. The specialty store may not even carry the merchandise in inventory;

rather it orders the merchandise when contacted by a customer. These customers may also buy accessories that are not readily available in land-based businesses because the volume is too small.

A second approach is for a store in a rural area to work with local providers of unique products but who, by themselves, are unable or unwilling to market over the Internet. For instance, craftspeople may produce unique items that have a market elsewhere. By working with several products, and marketing collectively, it may be possible for the consortium or cluster to be profitable. These could involve a wide range of products rather than those identified earlier because the purchases are likely to live in metro, rather than rural, areas. In fact, rural residents may find similar products in land-based businesses. Thus, this cluster approach is essentially marketing a sense of "rural".

Third, there is a role for public agencies such as cities and/or county governments to provide an infrastructure that allows local establishments to gain exposure and markets through a collaborative approach. In Illinois, for instance, several counties with assistance from a Rural Community Development Initiative project funded by USDA-Rural Development created a community web page that was then expanded to include private businesses. The businesses received funds to build their capacity to manage their own web page and to make their pages consistent with the overall community page. This approach provides excellent exposure for these businesses and allows them to capture economies of scale in web page design and management that otherwise would not be available.

Fourth, small rural stores may find it useful to take a lesson from the ACE Hardware model and pool their funds to purchase merchandise that is stored and distributed from a central warehouse. Individual stores can manage a web page that displays a wide assortment of merchandise and they could price according to local conditions. Customers could purchase the item on-line with the local business specializing in providing service for the product.

CONCLUSION

E-commerce offers few or no barriers to entry which has intensified competition in the business-to-consumer (b2**c**) sector. Since consumers have multiple choices for Internet purchases, it is essential that e-business owners understand consumer behavior and the types of goods or services likely to be made on the Internet. Likewise, the Internet is a major competitor for land-based businesses, especially those with a limited selection and higher prices. Small land-based businesses in rural areas must recognize the competition and devise innovative ways to market their products. Simply adding a web page is unlikely to be sufficient to successfully market their products. They may also have to identify new merchandise, make arrangements to expand the selection, and/or otherwise capture additional markets. This research is a first step in that direction.

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WHEN THE GOAL IS CREATING A BRAND PERSONALITY, FOCUS ON USER IMAGERY

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ABSTRACT

This research examines whether it is possible, through a firm's marketing efforts, to imbue a brand with meanings and give it a "personality." A model is presented and tested which includes associations representing three categories of brand associations: product attributes, corporate associations, and user imagery. It is shown that manipulating these associations in print advertisements results in different perceived brand personality traits being associated with the test brand. Among the three types of brand associations tested, user imagery is found to be the most powerful influencer of brand personality perceptions. The results also indicate that different types of brand associations may be combined to produce a desired brand personality profile.

INTRODUCTION

Brand personality has been defined as "the set of human characteristics associated with a brand" (Aaker, 1997, p. 347). This definition encompasses demographic characteristics [i.e., gender, age, and socioeconomic status], lifestyle characteristics [i.e., activities, interest, and opinions], as well as human personality traits [i.e., warmth, concern, and sentimentality] (Aaker, 1996). A review of the brand personality literature reveals a veritable "laundry list" of marketing variables that have been conceptually associated with brand personality (e.g., Aaker, 1996; Aaker, 1997; Batra, Lehmann & Singh 1993; Keller, 1993; McCracken, 1993; Ogilvy, 1985; Plummer, 1984). However, empirical research demonstrating the effects of various marketing variables on brand personality formation is very limited (Aaker 1997; Batra et al., 1993).

Aaker (1997), in discussing areas for future research using the brand personality scale (BPS) stated, "The brand personality framework and scale developed in this research also can be used to gain theoretical and practical insight into the antecedents and consequences of brand personality, which have received a significant amount of attention but little empirical testing" (p. 354). She indicated a need to learn how a brand acquires a personality by determining the extent to which the various marketing variables conceptually associated with brand personality influence the construct. Aaker (1997) asserted that such research would contribute to an overall understanding of the

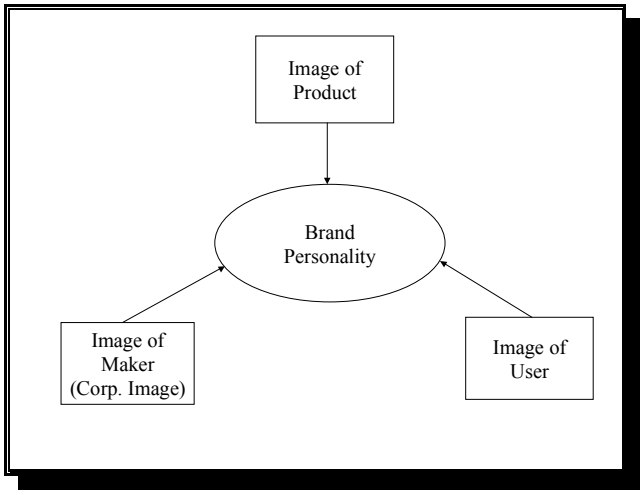
symbolic use of brands and provide insight into the variables that influence and are influenced by brand personality.

This paper develops hypotheses regarding the influence of three types of brand associations: corporate associations, product attributes, and user imagery in creating a brand personality, and presents the results of an experiment that tests the hypotheses. The following sections summarize current thought regarding how each of these variables may contribute to brand personality formation and offer justification for including them as brand personality antecedents in the proposed model.

CONCEPTUAL MODEL OF BRAND PERSONALITY SOURCE AND DEVELOPMENT

A schematic diagram of the conceptual model for this research is shown in Figure 1. The theoretical framework is adapted from Biel's (1993) model, and suggests that brand personality can be viewed as consisting of three categories of brand associations, those relating to the product itself, those relating to the maker of the product, and those relating to users of the product.

Figure 1: Brand Personality Antecedents



Adapted from Biel (1993)

The focal construct in the conceptual model, brand personality, consists specifically of those associations that involve human characterizations (Aaker, 1997). This is consistent with the views of brand researchers who consider a brand's personality distinct from its larger image (e.g., Aaker, 1996; Batra et al., 1993; Biel, 1993; Plummer, 1984). Although few would disagree that a brand's personality is a part of its image, since the brand image is thought to encompass the entire set of associations consumers hold for a brand (Plummer, 1984), the same could be said of virtually any

aspect of a brand of which consumers are aware. The focus of this study is specifically how the brand associations described in Biel's (1993) model influence that part of the brand image that makes up the perceived brand personality. It should be noted that Biel's (1993) model was conceptual in nature and has not been empirically tested.

Justification for applying the three categories of brand associations identified in Biel's model to brand personality formation may be found in the fact that each has been conceptually linked *specifically* with brand personality in other marketing literature (e.g., Aaker, 1996; Plummer, 1984). Furthermore, each meets important criteria of associations (accessibility and salience) that tend to become linked to personality trait inferences (Johar, Sengupta & Aaker, 2005; Wyer and Srull, 1989). A person for whom a particular trait is readily accessible in memory is more likely than one for whom the trait is not as accessible to use that trait in the process of forming initial impressions of others. However, accessibility may also be temporarily strengthened using situational methods such as priming, increasing the likelihood that an individual will use the newly accessible information to form initial trait inferences. In a brand personality context, research has demonstrated that people will modify their initial trait inferences about brands when presented with new information (Johar et. al., 2005). The ability of situational methods to increase trait accessibility and thereby influence brand perceptions is of particular importance in the current study since advertising is source of brand-related information for consumers.

There is also reason to believe that different types of brand associations should exhibit *differential* impact on the formation of the perceived brand personality. There are at least two possible explanations. The first has to do with the general transfer of meanings from "the culturally constituted world" to consumer goods, which is accomplished through advertising (McCracken, 1989, p. 313). This is similar to a conditioning process, in which advertisers identify cultural symbols that connote meanings they wish to be associated with their brands and employ those symbols in their advertisements to create the desired linkage in the minds of consumers. Implicit in this process is the notion that different cultural symbols carry different meanings. The second relates to the relevance of various brand associations for different products and brands. For some brands (i.e., Grey Poupon mustard), perceptions of the manufacturer (Kraft) may be relatively unimportant to most consumers, whereas user imagery is a major source of brand perceptions. For other products (e.g., a Sony television or Hoover vacuum cleaner), user imagery may have relatively little to do with consumer brand perceptions, while the perceptions of the manufacturer and/or attributes of the product are very important (Biel, 1993).

It is important that brand personality formation be considered in terms of both the components that comprise it and the means through which these components become linked to the brand. Advertising is thought to be one of the most powerful tools available to marketers for influencing the meanings consumers associate with a brand, including the brand personality (Biel, 1993; McCracken, 1989). Batra et al. (1993) suggest that every element of an advertisement contributes to the brand personality, including (in print ads) text, illustrations, typography, colors,

and layout. However, they also note that little is known regarding how various ad elements "contribute to the establishment and reinforcement of a particular type of brand personality" (p. 93-94). Although it is clear that consumer brand perceptions can be influenced by advertising, and that different themes and other message elements presented through advertising can have a differential affect on such perceptions, the ability of different types of advertised brand associations to influence the human characteristics consumers associate with brands has, to our knowledge, received very little testing. Thus, this study additionally seeks to determine empirically whether different types of brand associations, presented through an advertising medium, can result in meaningful perceived brand personality profiles for a product brand. The following section develops hypotheses regarding each of the three categories of brand associations as brand personality antecedents.

HYPOTHESIS DEVELOPMENT

Brand associations have been conceptualized as being arranged in human memory hierarchically by increasing level of abstraction (Keller, 1993; Kirmani & Zeithaml, 1993; Peter & Olson, 1993; Zeithaml, 1988). Keller (1993) identifies three levels in the hierarchy (from least to most abstract) as attributes, benefits, and attitudes.

Attributes have been conceptually linked with brand personality formation in the relevant literature quite frequently (e.g., Aaker 1996; Aaker, 1997; Batra et al., 1993; Biel, 1993; Keller, 1993; McCracken, 1993; Plummer, 1984). Keller (1993) defined attributes as "those descriptive features that characterize a product or service…what a consumer thinks the product or service is or has and what is involved with its purchase or consumption" (p. 4). Although the attribute-brand personality connection, specifically, lacks empirical support, several studies have demonstrated that product attributes influence other consumer perceptions of a product or brand (e.g., Dacin & Brown, 1997; Dowling, 1988; Faircloth, 1996; Yeung & Soman, 2005). Attributes are also thought to serve as a foundation for many of the higher order associations consumers develop for a brand (Biel 1993; Zeithaml 1988). Thus, it is reasonable to suggest that the physical characteristics of a product, as well as other descriptive features that would be characterized as attributes, may represent an influence on consumer perceptions of a brand's personality traits.

H1: A print ad featuring product attributes will result in different ratings of one or more brand personality dimensions compared to a control ad.

Corporate associations are cognitive associations for a company and provide the basis of corporate image (Dacin & Brown, 1997). When corporate associations suggest human characteristics for a brand, they may also contribute to the brand's personality (Aaker 1996; Aaker, 1997; Batra et al., 1993; Biel, 1993). For example, a German brand like Mercedes might capture some perceived

characteristics of German people (such as precise, serious, hard-working), while Ben & Jerry's, an internationally recognized producer and retailer of premium ice cream and yogurt that strongly supports social and environmental activism, might carry connotations such as caring or involved (Aaker, 1996).

Consumer perceptions of a product may be partially based on their attitudes toward the corporation that produces it. For instance, a consumer may be generally favorably predisposed toward a new Microsoft software product based on her positive attitude toward the company. A variety of theoretical positions support such a mechanism, such as affect transfer (Lynch, Marmorstein & Weingold, 1988; Wright, 1975), category-based processing (Fiske, 1982), or cognitive consistency (Osgood, Suci & Tannenbaum, 1957). Category-based processing refers to consumer perceptions of a company or product based upon the mental category into which it is assigned by a consumer. For example, a consumer may mentally categorize a company such as Dow as a "chemical company" and assign traits she associates with chemical companies (i.e., polluter) to that company. Likewise, the consumer may associate some attributes of chemical companies to the products produced by companies in that industry. Additionally, consumers may infer specific characteristics of a brand according to what they believe about the company producing it (Dacin & Brown, 1997; Dick, Chakravarti & Biehal, 1990; Keller & Aaker, 1992; Wansink, 1989). Likewise, a consumer may infer that a new Microsoft software product is technologically advanced based upon his belief that the corporation is technologically sophisticated. Keller and Aaker (1992) demonstrated that positive corporate associations can enhance product evaluations along a particular dimension, such as environmentally friendly, even if the product itself is positioned along a different dimension, such as technologically innovative, suggesting that perceptions of the corporation may add to (or detract from) the corporation's attempts to influence consumer perceptions of a brand directly through its brand marketing activities.

H2: A print ad featuring corporate associations will result in different ratings of one or more brand personality dimensions compared to a control ad.

User imagery has been defined as the set of characteristics associated with a typical user of a brand (Aaker, 1996). It has been suggested that the personality descriptors associated with a brand arise most often from the underlying user or usage situation, or from emotions or feelings evoked by the brand (Plummer, 1984). McCracken (1989) argued that personality traits may be transferred to a brand through user imagery presented in advertising. User imagery can be conveyed in advertising by using a presenter or spokesperson (McCracken, 1989, Rossiter & Percy, 1987), or by portraying actors or models using the product and/or placed in settings or situations that evoke a feeling, picture, or mood the advertiser wishes to associate with using the product (Aaker, 1996). It appears that nonverbal aspects of an ad, such as user imagery, may transfer meanings to brands both directly (Aaker, 1996; McCracken, 1989) and indirectly through inference processes (e.g.,

Batra et al., 1993; Kardes, 1988). Kardes (1988) suggested that the process of forming beliefs through inference might be especially powerful when the beliefs relate to the social or normative aspects of the brand.

H3: A print ad featuring user imagery will result in different ratings of one or more brand personality dimensions compared to a control ad.

Of the three categories of brand associations, user imagery has been viewed as perhaps the most important when it comes to creating a brand personality (McCracken, 1989; Plummer, 1984). Biel (1993) placed particular emphasis on the user component as an important source of imagery, stating, "Perhaps the strongest contributor (to brand image) is the impression people have of the brand's users" (p. 73). This view is based on the idea that users can transfer personality attributes directly to the brand, whereas other antecedents must rely mainly on the consumer's willingness and/or ability to make inferences about personality characteristics from other brand associations (Aaker, 1996; Batra et al., 1993; Biel, 1993; McCracken, 1993; Plummer, 1984). Aaker (1996) claimed that this direct transfer is possible because the "user is already a person and thus the difficulty of conceptualizing the brand personality is reduced" (p. 147). Furthermore, the brands consumers use contribute to their social identity and, thus, "the reactions of significant others." Therefore, an advertiser's message about the "social context of a brand, the kind of user the brand is for, or the user personality that the brand communicates" can tie directly to the consumer's self-concept, bestowing it with an intrinsically high level of importance (Batra et al., 1993, p. 94). Finally, evidence suggests that higher level, more abstract brand associations, such as user imagery have greater influence than lower level attributes on brand image formation and brand preference (Batra et al., 1993; Biel, 1993; Lutz, 1991; Myers & Shocker, 1981; Zeithaml, 1988). These ideas provide the basis for Hypothesis 4.

H4: User imagery presented in a print advertisement will result in a stronger brand personality profile being assigned to the brand than will either corporate associations or product attributes.

In H4, "stronger" means that the magnitude of the difference between the composite brand personality profile generated by an ad featuring user imagery and a control ad will be significantly larger than the difference between the composite profiles generated by ads featuring only attributes or corporate associations and the control ad.

There is evidence that different *levels* (or profiles) of the *same type* of brand association can influence brand perceptions in diverse ways. For example, Dacin and Brown (1997) found that the degree to which a manufacturer is perceived as a competent producer and deliverer of products, as opposed to one that is concerned with societal responsibilities (both are corporate associations),

differentially influences evaluations of new products produced by the firm. In one of their experiments, Aaker, Fournier & Brasel (2004) manipulated the perceived personality of a service brand through a series of printed materials. However, the ability of an advertiser to manipulate a brand personality profile by varying the content of a specific type of brand association within a specific ad has not been tested, leading to Hypothesis 5.

H5: Different versions of the same type of brand association (i.e., "business" user imagery versus "sports" user imagery) presented in print ads will result in different ratings of one or more brand personality dimensions.

One advantage of advertising compared to other marketing communication vehicles is that different brand associations may be easily combined and manipulated to produce desired consumer responses. Knowledge regarding the ability of brand associations presented through advertising to influence perceived brand personality traits is of little value to marketers if such trait inferences cannot be controlled, to a degree, by the marketer. Hence, H6 considers the effects of the portrayal of different advertising themes communicated through different combinations of the three types of brand associations of interest in this study on creating specific brand personality profiles.

Two advertising themes were selected to test this hypothesis, a sports-oriented theme (using masculine user imagery) and a business-oriented theme (using feminine user imagery - see the Research Design section for a more thorough description). These themes were selected based on a pretest in which participants were asked to select advertising themes they viewed as most opposite from a list of several themes. Aaker (1997) suggests that the Excitement dimension of brand personality embodies "notions of sociability, energy, and activity," whereas the Ruggedness dimension connotes "strength and masculinity" (p. 353). These are the types of personality traits the associations presented in the sports-oriented print advertisements (see Appendix A) are designed to produce. Likewise, the Competence brand personality dimension connotes "responsibility" and "dependability", whereas the Sophistication dimension incorporates "aspirational associations such as upper-class, glamorous, and sexy" (p. 353). The associations presented in the business-oriented ads are designed to create these perceptions of the brand in the minds of the experimental subjects.

H6: Different profiles based on specific thematic combinations of corporate associations, product attributes, and user imagery depicted in print advertisements will result in different ratings of one or more brand personality dimensions. Ads communicating a "sports" theme will result in higher ratings of the Excitement and Ruggedness brand personality dimensions, whereas those communicating a "business" theme will result in higher ratings of the Competence and Sophistication dimensions.

RESEARCH DESIGN

The test product used in the study was a real but unfamiliar brand of sunglasses. The initial phases of the study involved a focus group and a pretest to develop the brand associations to be manipulated and perform manipulation checks. In the main study, the test product's brand associations were manipulated with a series of print advertisements. The subjects were assigned to either a print advertisement manipulation group or a control group. After exposure to the advertising stimuli, subjects completed Aaker's (1997) brand personality scale (BPS). Brand personality scores based upon the BPS were developed for the randomly assigned subjects, and the differential effects of the brand association manipulations were ascertained through the use of MANOVA.

Product Category

Sunglasses were chosen as the product category for this study. A number of factors were considered in the selection of this product category. First, it was important for the sample population of subjects (students) to be able to evaluate and process brand associations related to the product that were presented to them in the advertisements. Thus, some familiarity with the product category was necessary (e.g., Andrews & Shimp, 1990; Berger & Mitchell, 1989; Edell & Staelin, 1993). Industry sources, including a marketing officer for Oakley Corporation, the director of the Sunglasses Association of America and managers at several sunglasses specialty retailers, confirmed that college-age consumers are a major target market for sunglasses. An author conducted the interviews by telephone and asked questions from a prepared list concerning target markets for sunglasses, various sunglasses brands, and important product features and benefits typically considered in the purchase decision. Second, since manipulations of brand associations were an important part of the study, it was important for the product to have a relatively small number of salient or determinant attributes. This simplified the decision making process for the subjects and enhanced the validity of the perceptual and behavioral measures used (Mitchell, 1986). A third reason for choosing sunglasses as the test product was their potential personal relevance. Aaker (1996) suggests that fashion objects are intrinsically linked to the self-concept and, therefore, lend themselves particularly well to personality expression. Although sunglasses perform a utilitarian function, the "look" they provide to the consumer is undoubtedly an important consideration for many purchasers. Finally, Berger & Mitchell (1989) note that it is important to use products that can easily be differentiated in an experimental setting.

The need to use fictitious brands to control for preexisting brand knowledge, preference, or usage experience has frequently been noted in the literature (e.g., Homer 1990; Keller 1987; Keller and Aaker 1992; Laczniak and Muehling 1993). Thus, an actual but unknown brand (essentially equivalent to a fictitious brand for the subjects involved in the study) was used in the study. Discussions with industry representatives, Internet searches, and perusal of magazine advertisements

initially identified a large number of brands. Brand name awareness (recognition and recall) for these brands was later tested in the focus group and pretest. The Pepper's brand name of sunglasses had the lowest awareness among the brands tested.

Subjects

Subjects consisted of undergraduate and some graduate students attending six different universities in the southeastern U.S. Students are commonly used as subjects in experimental research (e.g., Laczniak & Muehling, 1993; MacKenzie & Lutz, 1989; Yi, 1993), and there is evidence that they can produce externally valid results when they "resemble the populations they are to portray" (Zikmund, 1994). For the chosen product class, student subjects' consumption behavior and perceptions were thought to resemble those of typical users, and this was confirmed by the industry sources. Two hundred and ninety-five subjects participated in the main study. Demographically, the subjects were 45% male and 55% female. Seventy-seven percent were 18-23 years of age, and 23% were over the age of 23. The subjects were 72% Caucasian, 21% African-American, and 7% of another race or ethnic background.

Advertising Stimuli

The advertising stimuli used in the study consisted of seven full-color print ads that depicted the various brand associations. The ads were professionally designed and produced to ensure high quality and a professional appearance. The set consisted of a control ad, one ad featuring product attributes, one featuring corporate associations, two depicting different types of user imagery, and two depicting different combinations of all three types of brand associations (product attributes, corporate associations, and user imagery). The ads were designed to be similar in visual impact. The basic layout of each ad was the same, except the user photographs and/or body text varied depending on the specific brand association(s) being manipulated. The same product photograph and background was used in all of the ads. Each ad was the same size and had the same amount of space devoted to the product photo and brand name/logo. Likewise, the same amount of space was devoted to the text or photos used to manipulate the brand associations (e.g., Edell & Staelin, 1993). Identical filler text was included in each ad to give a more complete and professional appearance.

The control ad consisted of a photograph of the product, the brand name/logo, and the filler text that was common to all the advertisements and unrelated to the various brand associations being tested. The attributes and corporate associations ads additionally featured text to present the various attributes or corporate associations. The first user imagery ad featured photographs of three businesswomen shown in various business situations. The second featured photographs of three men involved in various sporting activities. All models in the photographs were wearing the advertised

sunglasses. The remaining two ads featured different combinations of all three types of brand associations.

Development of Brand Associations

Several activities were undertaken to develop the brand associations to be manipulated in the study. First, as noted previously, industry representatives were consulted regarding the importance of product attributes (and associated benefits), corporate associations, and user imagery as factors in the purchase decision. They agreed that all three can play an important role in the consumer's evaluation process. The industry representatives identified a number of brands having low brand name recognition and market share in the southeastern United States, including the test brand ultimately chosen for the study (Pepper's). Brand name recognition for these brands was tested in the subsequent focus group and pretest to verify low awareness among the experimental subjects.

Focus Group

A focus group was conducted to identify the key brand associations students consider when purchasing sunglasses and the overall importance of sunglasses as a product category to this segment of consumers. The focus group consisted of eight participants drawn from a student population that was demographically similar to that used in the main study. The focus group generated a list of purchase criteria related to each of the three brand association categories (product attributes, corporate associations, and user imagery). The focus group also discussed the relative importance of these criteria and others not generated by the participants but suggested by the industry representatives.

The main goal of the focus group was to identify associations that were highly relevant for the product category, yet different from one another so that the advertising manipulations would be strong enough to produce an effect. For example, the participants agreed that style, price, tinting (darkness or lightness), color or finish, durability (materials and construction), and comfort (weight and fit) were the most important choice criteria among the attributes. The participants agreed that the brand name and the company's reputation for quality were the more important choice criteria among the corporate associations. The participants were unable to reach consensus regarding the most important types of user imagery, arguing that this was dependent on individual preferences. However, when asked to think about contrasting types of user imagery, most participants agreed that they would consider sports imagery versus business imagery as opposites. The participants also pointed out that "masculine" versus "feminine" imagery would clearly be considered as opposite. It was on this basis that the "sports" and "business" themes were chosen for the user imagery ad manipulations. In terms of opposing corporate associations, most agreed that high-tech; innovative associations versus conservative, classic associations would represent a good contrast.

The combination of the industry consultations and focus group findings generated the specific associations and combinations of associations to be manipulated in the main study. The test brand was unfamiliar to all focus group participants, and the participants agreed that the purchase of sunglasses would be at least a moderately important purchase.

Pretest

A pretest of 48 students was conducted to examine attitudes and reactions to the advertising stimuli used in the study. The pretest subjects were 47% male and 53% female and Seventy-five percent were 18-23 years of age. Eighty-one percent were Caucasian, 13% African-American, and 6% of another race or ethnic background.

One goal of the pretest was to assess the perceived professionalism of the ads and their comparability in terms of overall visual impact. The goal was to produce ads that were perceived as visually similar and comparable in quality to professionally designed ads that might be seen in a popular press magazine. Visual similarity was assessed using a single item with responses measured on a 7-point Likert-type scale (7=strongly agree to 1=strongly disagree), and an open-ended question to determine which ads were perceived as most different from the others and why. Although some differences in visual impact were noted (the median rating on the 7-point scale was 3.0), the ads were essentially perceived as "similar looking".

Overall appearance was assessed with a question asking participants to indicate the degree to which they agreed or disagreed that the ads looked reasonably professional, using a 7-point Likert-type scale (7=strongly agree to 1=strongly disagree). Nearly 90% of the respondents indicated a rating of 5 or higher, indicating strong agreement with the statement. The mean rating was 5.6, whereas the median rating was 6. No respondent indicated a rating below 3.

The pretest also included a manipulation check to ensure that subjects were able to distinguish between the brand associations presented in the print advertisements. Each participant was provided with a packet containing each of the seven, full-page print ads (six manipulating brand associations plus the control). The participants were instructed to view each ad as if they were seeing it in a magazine at home, and then complete a questionnaire containing questions about the ads. The participants were asked to match each ad with the type of brand association or combination of associations presented in the ad. The order in which the association descriptions were presented to the participants was varied. The percentage of correct classifications ranged from 91.7% for the control ad 95.7% for the business and s[ports user imagery ads.

Main Study

In the main study, subjects were randomly assigned to either the control group or one of the six experimental treatment conditions. The six experimental treatment groups included: one group

for the attribute manipulation, one group for the corporate associations manipulation, two groups for the user imagery manipulations (business or sports), and two groups for the two different combinations of all three association types. There were approximately 40 subjects in each group.

Each student was provided a packet of materials containing: (1) instructions for the study and a fictionalized statement of its purpose, (2) questions measuring demographic characteristics, (3) one of seven print ads associated with the experimental treatment group to which the subject had been assigned, (4) the 42 item BPS, and (5) an open-ended question to test for demand effects. A lottery, in which prizes were distributed to randomly selected respondents, was used to encourage participation and involvement in the study procedures. The researcher explained to the entire group the lottery, the importance of participation, and what was required to be eligible for the lottery drawings.

Measurement Assessment

Confirmatory factor analysis was performed in LISREL 8.3 in order to develop and test the factor structure, as well as the reliability and validity of the constructs representing the brand personality dimensions. The measurement model was tested using a covariance matrix of the relevant indicators and the parameters were estimated using the maximum likelihood method. The initial model contained all 42 brand personality items. However, the final model was reduced to 14 items in the process of purifying the scale to achieve desirable measurement properties. Use of the BPS will be discussed further in the Limitations and Directions for Future Research section. Ultimately, the confirmatory factor analysis produced a model that corresponded to the five brand personality dimensions with each dimension represented by at least two variables.

Overall (absolute) model fit was assessed using a number of measures furnished in the LISREL output. A chi-square value of 126.50 (df=67, p=.001) was observed. P values less than .10 suggest that the overall model should be rejected for poor fit. However, the chi-square test has been shown to be especially sensitive to large sample sizes, which can lead to the improper rejection of a model having acceptable fit (Bagozzi & Yi, 1988). Other commonly used absolute fit measures (GFI of .94 and AGFI of .91) were within recommended guidelines (Bagozzi & Yi, 1988; Joreskog & Sorbom, 1993). Recommended combinations of absolute and incremental fit measures (RMSEA .055, SRMR .045, CFI .96 and NNFI .95) also indicated adequate fit of the model to the data (Hu & Bentler, 1999).

The reliability of the model indicators and constructs was first evaluated, and then discriminant and convergent validity for the model constructs was determined. Construct (composite) reliability values of .60 or higher for each model construct (see Table II) indicated that the model achieved an acceptable level of reliability (Bagozzi & Yi, 1988; Hair, Anderson, Tatham & Black, 1995). Additionally, the variance extracted by all constructs in the measurement model, except the Sincerity dimension, exceeded the recommended threshold of .5 (Hair et al., 1995).

In addition to indicator and construct reliability, construct validity requires that convergent and discriminant validity be achieved. Each indicator's pattern coefficient on its respective construct was greater than twice its standard error, indicating that all of the constructs in the model demonstrated convergent validity (Anderson & Gerbing, 1988). Fornell and Larcker (1981) suggested that discriminant validity is present if the average variance extracted from two constructs is higher than the square of the correlation between the two constructs. Pairwise comparisons between each of the model constructs indicated that this condition was met throughout the model. Two other complimentary indicators of discriminant validity include phi ( ) correlations less than 1.0 between constructs (Bagozzi, 1980) and confidence intervals of +/- two standard errors around the phi correlations that do not include a value of 1.0 (Anderson & Gerbing, 1988) were also satisfied, providing further evidence of discriminant validity. In summary, all model constructs demonstrated adequate validity and internal consistency.

RESULTS

A full factorial MANOVA with post-hoc tests was used to analyze the results for Hypotheses 1-3, 5 & 6 (ANOVA with post-hoc tests was used to test Hypothesis 4). The independent variables in the MANOVA were the print ad manipulations versus the control (one for attributes, one for corporate associations, and one for user imagery), while the dependent variables were the subjects' ratings of the brand personality dimensions. All dependent variables (brand personality dimensions) except Sincerity achieved significance at the p ? .05 level (Hair, Anderson, Tatham & Black, 1995). The results of the analysis are depicted in Tables 1 and 2.

Table 1: The Effect of Ad Type on Perceived Brand Personality Dimensions

	MANOVA				ANOVA				
Sources	Wilk's Lambda	Effect Size (Eta2)	F-Value	Sig.	Sin-cerity	Excite-ment	Compe-tence	Sophis-tication	Rugged-ness
Main Effects/ Ad Type	.346	.971	11.4	.000	1.83	3.66	7.85	11.35	42.49
					(.093)*	(.002)	(.000)	(.000)	(.000)

*F-value followed by p-value in parentheses

Table 2: Main Effect Means for Brand Personality Dimensions

Brand Personality	Control	Ad Type					
		Product Attri-butes	Corp. Associ-ations	Business User Imagery	Sports User Imagery	Business Combi-nation	Sports Combi-nation
Dimension	(n=42)	(n=42)	(n=42)	(n=41)	(n=43)	(n=43)	(n=39)
Sincerity	4.35	4.60	4.61	4.79	4.43	4.27	4.83
Excitement	4.65	5.07	4.60	5.11	5.52*	5.03	5.35***
Competence	3.61	3.95	4.45**	5.22*	4.21	4.99*	4.64*
Sophistication	4.14	3.71	4.39	5.37*	4.12	5.63*	4.09
Ruggedness	4.13	4.66	3.97	2.43*	5.57*	2.71*	5.58*

* Different from control at p <.01
** Different from control at p <.05
*** Different from control at p <.10

Hypotheses 1-3 posited that, compared to a control ad, each of the three different types of brand associations presented individually in print ads (product attributes, corporate associations, and user imagery) would result in different levels of one or more brand personality dimensions being assigned to the brand. Support for this hypothesis was indicated if the print ads that featured only attributes, only corporate associations, and only user imagery produced a mean rating for at least one brand personality dimension that differed significantly from the mean rating for the control ad. The test statistic, Wilk's Lambda (.35), had a p value of .001, indicating that at least one group mean was different from the others. Tukey's HSD paired comparison tests revealed that the corporate associations ad and the ad featuring business user imagery produced at least one mean that differed significantly from the control advertisement mean for at least one brand personality dimension. The corporate associations ad had one significant difference, whereas the user imagery ad produced three significant differences. However, the attributes advertisement failed to produce a differential rating versus the control for at least one brand personality dimension. Thus, only Hypotheses 2 and 3 were supported.

Specifically, the corporate associations ad produced a mean rating of 4.45 for Competence, which was significantly larger than the mean of 3.61 for the Competence dimension produced by the control (p=.049). Likewise, the business user imagery ad produced a mean of 5.22 for Competence (compared to the Competence control mean of 3.61; p=.008), 5.37 for Sophistication (compared to the Sophistication control mean of 4.14; p=.001), and 2.43 for Ruggedness (compared to the Ruggedness control mean of 4.13; p=.001).

Hypothesis 4 (H4) proposed that the ad featuring user imagery would have a greater influence on the perceived brand personality (compared to the control ad) than either corporate

associations or product attributes ads. Since the objective was to test for differences between the *overall* brand personality profiles produced by the ads and since there was not a direct correspondence between the specific brand characteristics emphasized in the various ads, the mean scores for each of the five brand personality dimensions within the control and each treatment group were first summed. In other words, the magnitude of the difference between the composite profile generated by the control ad and the composite profiles generated by each of the three treatment ads was compared rather than differences between the control and treatment ads for the individual brand personality dimensions. The sports user imagery ad was used for the comparison.

One-way ANOVA (with Tukey's post-hoc tests) was employed to test for differences among the composite brand personality profiles generated by the ads. The test produced an F-value of 3.51 (p=.002), indicating that at least one profile was different from the others. The post-hoc tests revealed that only the user imagery ad produced a composite brand personality profile that was significantly different from that produced by the control ad (p=.024), thus supporting Hypothesis 4.

A competing explanation for the stronger user imagery results is that the user imagery ad generated a stronger manipulation than the ads featuring attributes or corporate associations. While all of the ads conveyed some information (such as the appearance of the product) pictorially, the user imagery ad featured no manipulative text whereas the attributes and corporate associations ads did. A different result might have been obtained had all three association types been manipulated using text, but this would have diminished the external validity of the findings because attempting to convey user imagery via text would be viewed by most observers as highly contrived in a print advertisement. Additionally, the pretest described previously confirmed that subjects viewed the ads a similar in visual impact.

Hypothesis 5 (H5) proposed that different types of user imagery presented in the print ads would result in different ratings of one or more brand personality dimensions. This hypothesis would be supported if the two ads featuring different user imagery profiles produced significantly different means for at least one brand personality dimension. Post-hoc tests of the business imagery versus the sports imagery ad within each brand personality dimension revealed that the two ads produced significantly different means for the Competence dimension (5.22 versus 4.21, respectively; p=.007), the Sophistication dimension (5.37 versus 4.12, respectively; p=.001), and the Ruggedness dimension (2.43 versus 5.57, respectively; p=.001). Thus, H5 was supported (See Table IV for the respective mean values - the paired comparisons are not shown in the table.). Although the hypothesis was not directional, these results also have intuitive appeal in that the business imagery ad produced higher ratings for Competence and Sophistication, whereas the sports imagery ad produced the higher rating for Ruggedness.

Hypothesis 6 (H6) posited that different combinations of corporate associations, product attributes, and user imagery depicted in advertising would result in different levels of certain "expected" brand personality dimensions being associated with the brand. The importance of this

hypothesis lies in the ability of the advertiser to manipulate the brand personality in a planned direction. In this case, the desired effect was for the business ad to produce higher ratings on the Competence and Sophistication dimensions and the sports ad to produce higher ratings on the Excitement and Ruggedness dimensions. This hypothesis would be fully supported if the differences occurred in the manner hypothesized (within the expected dimensions). Post-hoc tests revealed that the mean rating for the Sophistication dimension did, in fact, differ significantly across the treatment groups (5.63 for the business combination treatment group versus 4.09 for the sports combination treatment group; p=.001). Although the difference between treatment groups in the rating of the Competence dimension was not statistically significant at p ? .10, it was in the expected direction (4.99 for the business combination treatment groups versus 4.64 for the sports combination). Additionally, the mean for the Ruggedness dimension differed across the treatment groups (5.58 for the sports combination treatment group versus 2.71 for the business combination treatment group; p=.001). Although the difference in the ratings of the Excitement dimension across treatment groups was not statistically significant at p ? .10, it was also in the expected direction (5.35 for the sports combination treatment group versus 5.03 for the business combination). Thus, Hypothesis 6 was partially supported.

Although not hypothesized, post-hoc analysis also suggested that the combination ads created meaningful differences in the perceived brand personality profile compared to the ads featuring a single type of brand association. For example, the sports combination ad produced significantly higher scores than the corporate associations ad for the Excitement and Ruggedness brand personality dimensions (p=.034 and p=.000, respectively), and a higher score than the attributes ad for the Ruggedness dimension (p=.013). Likewise, the business combination produced higher scores that the attributes ad for the Competence and Sophistication dimensions (p=.006 and p=.000, respectively) and a higher score than the corporate associations ad for the Sophistication dimension (p=.001). These findings are certainly intuitive given the nature of the information communicated in the various ads. It is noteworthy that neither combination ad produced a significantly different rating for any brand personality dimension when compared to its corresponding user imagery ad (e.g., the sports combination ad compared to the sports user imagery ad), providing further evidence of the potency of user imagery in influencing trait perceptions compared to the other association types.

DISCUSSION

The results of this study indicate a significant effect of brand associations presented in print advertisements on consumer perceptions of a brand's personality traits. Corporate associations, user imagery, and different types of user imagery are each capable of generating different perceived brand personality profiles when presented in print advertisements. Furthermore, it appears that consumer brand personality perceptions can be influenced in a meaningful way in that different

types of brand associations (i.e., user imagery, corporate associations and/or product attributes) can be combined in an advertisement to produce a somewhat predictable brand personality profile. Hence, through the use of advertising, brand managers can control, to a degree, the extent to which a particular "personality" becomes part of a brand's overall image. However, it should be noted that this may only happen over the medium or long-term since a single exposure to an advertisement is unlikely to result in an enduring association of personality traits with a brand.

Perhaps the most important contribution of this study is the observation that, among the three types of brand associations examined, user imagery appears to be the most powerful influencer of brand personality perceptions. This supports the assertions of other researchers (e.g., Aaker, 1996; Biel, 1993; Plummer, 1984) who have suggested that this should be true for at least three reasons: (1) consumers can transfer personality traits directly from a user to a brand, while other brand associations require the consumer to make inferences about the brand's personality traits, (2) consumers sometimes use products and brands as a means of self expression, and the user imagery associated with these products/brands helps them identify and select those that possess or represent the characteristics they wish to communicate to others, and (3) more abstract brand associations, such as user imagery, have greater influence than lower level attributes on the formation of brand perceptions.

Of course, the implication for brand managers is that, compared to the other brand associations studied, user imagery portrayed in advertising may be the most effective means of creating a desired brand personality, especially for products that serve a self expressive function for consumers. In fact, our results suggest that, depending on the usage context (e.g., fashion versus function), user imagery alone may be sufficient to produce a desired brand personality profile. Many advertisers apparently agree in that inspection of nearly any fashion magazine will reveal that the use of ads featuring mainly user imagery is quite common.

The findings also indicate that consumer perceptions of the company that produces or markets a brand can influence the brand's perceived personality traits. Specifically, in this study, corporate associations positively influenced the brand personality dimension of Competence. This was an intuitive result based on both the specific associations presented in the ad (e.g., "We've Been Putting Style Into Business Since 1959") and the general manner in which corporate associations are thought influence brand perceptions. As discussed previously, consumer brand perceptions can be based on attitudes toward the corporation (Fiske, 1982; Lynch et al., 1988). In this case, since the brand in this study was previously unknown to the subjects, their differential perceptions of the brand's personality traits (compared to the control group) were based entirely on the information about the corporation presented in the ads.

While maintaining the public's view of the corporation often falls within the domain of public relations, our evidence suggests that directly communicating organizational characteristics that are particularly relevant to the brand's identity through advertising may also be an effective means of creating associative links between the manufacturer and the brand. However, as Nike and

other companies have learned, corporate associations, regardless of their source, can also influence consumer brand perceptions in a negative fashion (Klein, 1999). Thus brand managers should not neglect to consider the power corporate associations, however they are communicated, have to affect perceptions of their brands, and should make sure that the personality traits expressed or implied (perhaps unintentionally) through institutional ads do not conflict with or dilute the intended personality traits of the specific products/brands they offer.

Finally, insight may be gained from considering anticipated results that failed to materialize in this study. The ad featuring product attributes failed to produce a significant effect on the perceived brand personality dimensions compared to the control ad. The control advertisement featured a large photograph of the product, along with the ad headline, brand name, and trademark. The product attributes ad also featured these items along with the list of product attributes. In this case, the brand perceptions created by the list of attributes may have been consistent with those created by the image (photograph) of the product in the control ad, or the attribute manipulation may simply have been too weak to modify those perceptions to a significant degree. This suggests that product imagery presented in advertising, like user imagery, may exert an influence on the perceived brand personality. If so, then it is important to make sure that product imagery reinforces attribute information presented in an ad.

LIMITATIONS AND DIRECTIONS FOR FUTURE RESEARCH

Additional research relating to formation of brand personality with other types of products is necessary to expand our understanding of the consumer brand identity process. The product used in this study was a moderately high visibility product. Research regarding how a brand personality can be formed with lower and higher visibility products should also be undertaken. Furthermore, the product used in this study serves both a utilitarian and self-expressive function for consumers. Additional research could explore how a brand personality can be created for products that serve primarily a utilitarian function, and what benefits this might provide for producers and/or consumers. Likewise, a single product category was utilized to test the hypotheses in this study. Similar research using multiple product categories would enhance the generalizability of the findings.

The different types of brand associations (user imagery, corporate associations and product attributes) were combined in this study to produce specific effects on certain brand personality dimensions. Further investigation to determine the degree to which the different types of brand associations can be manipulated to produce specific effects on different facets of the brand personality may provide useful information to brand managers. In particular, the relationship between product attributes and the perceived brand personality warrants additional study. Although limited work has been done in this area (i.e., Johar et. al., 2005), additional research regarding different situations in which various brand associations would prove most powerful in influencing perceived brand personality traits may also be fruitful.

Aaker's (1997) brand personality scale was used to measure the brand personality. While this scale did provide usable items for each of the five established personality dimensions, it did not function as well as anticipated. One possible reason was that the BPS, which is multi-brand/product oriented, was used to evaluate a single brand in a single product category. Further research with other/multiple products/brands should be attempted using the BPS to better establish this scale. Additionally, the Sincerity brand personality dimension exhibited a marginal level of reliability, which calls into question the insignificant results obtained for this brand personality dimension.

While the findings indicate that ads featuring user imagery tend to have a larger impact on the perceived brand personality than do ads featuring product attributes or corporate associations, the degree to which this conclusion may be generalized to other relevant product categories warrants further study. User imagery was presented in the print advertisements through photographs of users, whereas product attributes and corporate associations were presented mainly through text (although a large photo of the product was also featured in the ads, through which subjects could visually ascertain some product attributes). Therefore, a competing explanation for the results regarding user imagery obtained in this study is that visually depicted associations are more vivid than those presented textually, thereby providing more material for use in inference making by consumers. While the authors could have manipulated user imagery using text rather than images, thus eliminating this difficulty, the result would have been advertising stimuli that appeared artificial. It would be useful to explore this issue further. Finally, this study investigated antecedents of brand personality. Equally important are consumer responses to a perceived brand personality. It has been suggested that brand personality potentially represents an important basis for differentiating similar products because it is not constrained by physical attributes that are subject to the changing taste and preferences of consumers (Aaker, 1996). Also, whereas product features can and do change frequently, brand personality may prove relatively enduring and resistant to change, thus providing a measure of protection from competitive threats (Aaker, 1996; Biel, 1993). Brand personality may serve as a central driver of consumer brand preference and usage, and as a common denominator that can be used to market a brand across cultures (Plummer, 1984). The brand personality may even form the basis of a consumer-brand relationship (Fournier, 1998). Each of these represents an area of potentially fruitful and important research related to outcomes of brand personality.

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TELLERS VERSUS TECHNOLOGY IN OVERALL CONSUMER SATISFACTION WITH BANKING SERVICES

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ABSTRACT

Proliferate use of technological conveniences offered by service providers has prompted interest in its effect on consumers' overall satisfaction. Service encounters play a vital role in ensuring consumer satisfaction because each individual encounter aggregates to form consumer overall satisfaction of a company. Prior research has indicated that both human encounters and technological encounters are indispensable for service firms. The authors examine the relative impact of the human encounter and the technological encounter on consumers' overall satisfaction. Findings from two studies reveal that while the human encounter was more important before online banking became so prevalent, the convenience of online banking has displaced the importance of human interaction.

INTRODUCTION

Service encounter satisfaction plays an integral role in the determination of overall satisfaction with the firm by the consumer. "Service encounters are critical moments of truth in which customers often develop indelible impressions of a firm. In fact, the encounter frequently is the service from the customer's point of view" (Bitner, Brown and Meuter 2000, p. 139). Shostack (1985) defines a service encounter as "a period of time during which a consumer directly interacts with a service" (p. 243). This interaction can be either with an employee or with the self-service technology of the company.

For interaction with an employee, personalization is an important factor in customer service satisfaction. Personalization involves the politeness, courtesy, and friendliness of an employee's behavior when interacting with a customer and affects customer service satisfaction (Mittal and Lassar 1996). However, self-service technology has created dramatic changes in the way a company interacts with its customers. According to Bitner, Brown and Meuter (2000), the number of encounters a customer has with a firm may dramatically increase due to the use of technology. The

impact of such changes on consumers' perception and level of satisfaction with the service provided by the firm is of interest. In this research, we examine the relative impact of the human encounter and the technological encounter on consumers' overall satisfaction.

THEORETICAL BACKGROUND

Overall Satisfaction Versus Encounter-Specific Satisfaction

Bitner and Hubbert (1994) define service encounter satisfaction as the consumer's dis/satisfaction with a discrete service encounter (e.g., a haircut, an interaction with a dentist, a discussion with a repair person, an experience at a hotel check-in desk) while overall satisfaction is an accumulation of all previous experiences with a service provider, and therefore is a function of all previous encounter-specific satisfaction (Jones and Suh 2000; Bitner and Hubbert 1994). Bitner and Hubbert (1994) found that encounter-specific satisfaction and overall satisfaction are distinct to consumers, but highly correlated. Empirical support was found for this distinction by Jones and Suh (2000), even when measuring both types of satisfaction with the same scale. Bitner et al. (2000) also suggested that the "service from a customer's perspective may actually be a relationship made up of repeated, similar service encounters" and that "each individual encounter can be critical in determining the customer's future behavior toward the company" (p. 139). Since, these encounters may be human encounters as well as technological encounters; we intend to examine the weight of human encounter satisfaction versus technological encounter satisfaction in determining consumers' overall satisfaction level with the firm.

Encounter specific satisfaction and its influence on overall satisfaction can be explained using attribution theory. According to Folkes (1984), attribution theory views people as rational information processors whose actions are influenced by their causal inferences. Prior research demonstrates that only in the case of a service failure do consumers look into the causes of that failure, however the cause is not considered in a successful transaction (Weiner 2000). "Attributions are what people perceive to be the causes behind their own behavior, the behaviors of others, or the events they observe" (Bitner 1990, p. 70). According to Bitner (1990), "Weiner's long stream of research on attributions has led to the conclusion that most cases can be classified on three dimensions: locus (Who is responsible?), control (Did the responsible party have control over the cause?), and stability (Is the cause likely to recur?)" (p. 70). Folkes (1984) states that this classification has been linked to behavioral consequences.

Human Encounters Versus Technological Encounters

In 1994, Kotler developed a model to represent services marketing (Kotler 1994). The Triangle Model of services marketing consists of three key points: the company, employees and

customers (Kotler 1994). In 1996, in order to reflect the growing importance of technology in the services industry, Parasuraman extended Kotler's Triangle Model by adding a fourth dimension, technology, to form a Pyramid Model (Parasuraman and Grewal 2000). The base of the pyramid reflects the dynamic relationships among employees, customers, and technology (Bitner, Brown and Meuter 2000). The Pyramid Model emphasizes the critical linkages between each of these parties in determining the success of the service organization.

The satisfaction the customer derives from an interaction with an employee of the company, referred to as human encounter satisfaction, plays an important role in consumers' overall satisfaction with the services of the company. Social exchange theory implies that perceived justice (i.e., the consumers' perception of being treated fairly) affects customer satisfaction. Carr (2007) has incorporated justice theory as the optic from which to view the relationship between the consumer and the service provider and the resulting service satisfaction. His findings using his FAIRSERV model add significant, new predictors of service satisfaction than those previously offered using the traditional SERVQUAL model (Carr 2007). The three dimensions of perceived justice with complaint handling have been identified as distributive, procedural, and interaction justice (Tax et al. 1998). Distributive justice involves dealing with decision outcomes; namely, the principles of equity and equality. Procedural justice involves dealing with decision-making procedures, or having a complaint procedure the customers perceive as fair. Interactional justice entails the interpersonal treatment the customer receives during the enactment of the procedures. Consumer evaluation of the interaction dimension suggests that the quality of the interpersonal treatment and communication during the encounter are likely to be heavily weighted by consumers when evaluating service encounters (Smith, Bolton and Wagner 1999). Human interaction becomes even more important in responding to consumers with special needs, requirements, or preferences where personal attention is required (Bitner, Booms, and Tetreault 1990).

Technological encounter satisfaction, or the satisfaction the customer derives from an interaction with the technology of the company, also plays an important role in consumers' overall satisfaction. The use of technology has permeated all aspects of the services industry (e.g., automated teller machines, pay-at-the-pump gasoline, and grocery self-checkout lines). In these instances, customers actually provide the service for themselves using the self-service technologies of the company, without any employee involvement (e.g., automated teller machines, E*Trade, or online ticketing) (Bitner, Brown and Meuter 2000). Self-service options can either completely replace or complement the services of the organization (Bitner, Brown and Meuter 2000). The main concern of service organizations utilizing more technology is that a technological failure is highly apparent because the transaction cannot be completed (i.e., money could not be drawn from the bank). However, human failure can be considered more ambiguous because, while the service does not meet expectations, the transaction can still be completed (Meuter, 2000).

Consistent with the implications of attribution theory, we propose that human encounters will play a larger role in predicting overall satisfaction than technological encounters. In a technological

(self-service) transaction, consumers will accept responsibility themselves and, due to the lack of a third party to blame, they are less likely to be upset by a service failure. Overall, we posit that consumers are likely to accept more responsibility for the outcome of self-service technology failure and, hence, may continue usage of technology as a service provider in the future. On the other hand, they will be more dissatisfied with a failure in a transaction involving a human encounter in which they can blame the employee. Similarly, a successful transaction via a human encounter will carry more weight as compared to a successful transaction via technology. Therefore, it is posited that, although each type of encounter satisfaction is predicted to be significant, the human encounter will carry more weight in consumer evaluation of overall service satisfaction.

Hypothesis 1: *Satisfaction with the human encounter will have a stronger impact on overall satisfaction than satisfaction with the technological encounter*

STUDY ONE METHOD

Dependent Variable

The dependent variable of interest is overall satisfaction with bank services. In order to operationalize overall satisfaction, respondents were asked to think about all prior experiences with that specific bank. Six items were used to measure overall satisfaction using five-point Likert scales. One item asked respondents to indicate how satisfied or dissatisfied they were with the service at their bank based on all their experiences. The remaining five items were statements to which the respondents indicated their level of agreement or disagreement.

Independent Variables

The independent variables identified included human encounter satisfaction and technological encounter satisfaction. Human encounter satisfaction was operationalized as the last encounter with a bank teller. This was measured with six items using five-point Likert scales. Respondents were presented with statements to which they indicated their level of agreement or disagreement to their encounter with a bank teller. Technological encounter satisfaction was operationalized as the last encounter with a bank Automated Teller Machine (ATM), and was similarly measured with six items using five-point Likert scales. Again, respondents were presented with statements to which they indicated their level of agreement or disagreement to their encounter with an ATM.

Subjects and Procedure

The surveys were administered to undergraduate students from six business classes for extra credit. Banking was selected to be the context to be used to test the hypothesis. Data were collected from 194 undergraduate university students who have a bank checking account. Students were told that a survey was being conducted on bank services. Consent forms were collected and confidentiality was also ensured. Students were advised to read the instructions carefully and to take the time necessary to fill out the survey completely. The measurement instrument was adapted from the work of Bitner and Hubbert (1994) with a few minor modifications.

The first section asked questions regarding the name of the bank in which the respondent had a checking account, the length of time the respondent had this account, and the frequency in which the respondent used the teller and ATM services of that bank. Sections 2 and 3 each consisted of six questions related to satisfaction with the last encounter the respondent had with a bank teller and a bank ATM machine, respectively. Section 4 consisted of overall satisfaction with the bank, taking into consideration all experience with that bank. Section 5 consisted of questions related to computer and Internet usage of the respondent and were not examined in this study. Section 6 collected demographic information of the respondents. The instrument was pre-tested and minor modifications were made.

RESULTS

The descriptive statistics were examined to establish the demographic profile of the respondents. Most of the respondents are between the ages of 19 and 21 years and are classified as juniors at the university. Each gender is equally represented in the study.

Data was analyzed to determine banking behavior of the respondents. They indicated having a checking account at one of 31 different banks. Results indicate that 74.7 percent of the respondents have held their checking account at their present bank between one and five years, 14.9 percent for less than one year, and 9.8 percent for six to ten years. Also, 80.9 percent of the respondents have used the teller service at their bank and 86.1 percent have used the ATM.

The reliability tests showed high Cronbach's alphas for overall satisfaction ($\alpha = .91$), human encounter satisfaction ($\alpha = .90$), and technological encounter satisfaction ($\alpha = .90$). Multiple regression analysis was conducted using the stepwise approach to determine the influence of human and technological encounter satisfaction on overall satisfaction. The multiple regression results are shown in Tables 1(a) and 1(b). The results in Table 1(a) show that the overall model is significant ($F=13.418$, $p<.001$), indicating that both types of encounter satisfaction predict overall satisfaction. However, in support of the hypothesis, the beta coefficients indicate that human encounter satisfaction ($t = 4.475$, $p< .001$, $\beta = .331$) is a much stronger predictor of overall satisfaction than technological encounter satisfaction ($t = 1.987$, $p = .049$, $\beta = .147$).

Table 1(a): Multiple Regression Results					
Model	F	Sig.	Beta	t	Sig.
[a] Overall Model	13.418	.000			
Human Satisfaction			.331	4.475	.000
Technological Satisfaction			.147	1.987	.049
[a] Predictor: Human Encounter Satisfaction, Technological Encounter Satisfaction Dependent Variable: Overall Satisfaction					

Table 1(b): Multiple Regression Results					
Model	R	R Square	Adjusted R Square	R Square Change	Significant F Change
1[a]	.351	.123	.118	.123	.000
2[b]	.380	.144	.134	.021	.049
[a] Predictor: Human Encounter Satisfaction [b] Predictor: Human Encounter Satisfaction, Technological Encounter Satisfaction Dependent Variable: Overall Satisfaction					

As displayed in Table 1(b), both human encounter satisfaction and technological encounter satisfaction are associated with overall satisfaction explaining 14 percent of the variance in the dependent variable (R square = .144). The increase in the R square (.123 to .144) shows that both human and technological encounter satisfaction explain more variance in the dependent variable than human encounter satisfaction alone. While the incremental contribution of technological encounter satisfaction is significant (p=.049), the R square change (.021) is small.

Additional Analysis

Additional analysis was conducted by dividing the respondents into two groups according to their preference for service provided by a human being and self-service technology. Regression was run for each group separately. The results shown in Tables 2(a) and 2(b) indicate that for those respondents that prefer human interaction, satisfaction with technology has no effect (t=-.188, p=.851, β =- .021) and human encounter satisfaction is the only predictor of overall satisfaction (t=3.597, p=.001, β = .402). The R^2 change remains the same (R^2 change = .000), indicating that technology encounter satisfaction explains no more variance in the dependent variable than human encounter satisfaction (R^2 change = .156). This is likely attributable to the fact that these individuals hardly use self-service technology.

Table 2(a): Multiple Regression Results					
Human Interaction Preference Group					
Model	F	Sig.	Beta	t	Sig.
[a] Overall Model	7.296	.001			
Human Satisfaction			.402	3.597	.001
Technological Satisfaction			-.021	-.188	.851
[a] Predictor: Human Encounter Satisfaction, Technological Encounter Satisfaction Dependent Variable: Overall Satisfaction					

Table 2(b): Multiple Regression Results					
Human Interaction Preference Group					
Model	R	R Square	Adjusted R Square	R Square Change	Significant F Change
1[a]	.394	.156	.145	.156	.000
2[b]	.395	.156	.135	.000	.851
[a] Predictor: Human Encounter Satisfaction [b] Predictor: Human Encounter Satisfaction, Technological Encounter Satisfaction Dependent Variable: Overall Satisfaction					

However, the respondents who prefer technological interaction revealed interesting results (see Tables 3a and 3b). While technological encounter satisfaction was significant (F=7.112, p=.001), results showed that for these respondents human interaction was also considered more important (β = .329) than technological encounter satisfaction (β = .259). Further, a greater R^2 change was found for technological encounter satisfaction (R^2 change = .066) than compared to the overall model (R^2 change = .021) (see Table 1b).

Table 3(a): Multiple Regression Results					
Technological Interaction Preference Group					
Model	F	Sig.	Beta	t	Sig.
[a] Overall Model	7.112	.001			
Human Satisfaction			.329	3.113	.003
Technological Satisfaction			.259	.259	.017
[a] Predictor: Human Encounter Satisfaction, Technological Encounter Satisfaction Dependent Variable: Overall Satisfaction					

Table 3(b): Multiple Regression Results					
Technological Interaction Preference Group					
Model	R	R Square	Adjusted R Square	R Square Change	Significant F Change
1[a]	.303	.092	.080	.092	.007
2[b]	.397	.158	.136	.066	.017

[a]Predictor: Human Encounter Satisfaction
[b]Predictor: Human Encounter Satisfaction, Technological Encounter Satisfaction

DISCUSSION

The purpose of this study was to establish the importance of human encounter satisfaction as compared to technological encounter satisfaction in overall service satisfaction. Although technology may increase the number of encounters the customer has with the firm (Bitner, Brown and Meuter 2000) and enhance customer satisfaction with every successful encounter, the human element is not to be ignored. The additional analysis further revealed that for individuals who prefer human encounters, technological encounter satisfaction does not play a role in determining their overall satisfaction with the service. However, for individuals who prefer technological encounters, human encounter satisfaction is still more important in determining their overall satisfaction. These findings provide further support for the hypothesis.

Considering the increase in the use of online banking services ("What" 2001), a second study was conducted to include this popular form of technological interaction. In addition to the independent variables in Study One, banking service encounter satisfaction to overall service satisfaction will be examined.

STUDY TWO METHOD

Dependent Variable

Again, overall satisfaction with bank services is the dependent variable. Study Two utilized the same six-item, five-point Likert scales used in Study One.

Independent Variables

The independent variables was again the human encounter satisfaction and technological encounter satisfaction. Human encounter satisfaction was operationalized using the same measures used in Study One. However, two types of technological encounter satisfaction were measured in

Study Two. Using the same six items and five-point Likert scales as in Study One, the last encounter with the bank ATM and the last encounter with the online banking service operationalized technological encounter satisfaction.

Subjects and Procedure

Surveys were administered to one undergraduate and two graduate business classes. Banking was again used as the context. Data were collected from 153 respondents who have a bank checking account. The same procedures were used as in study one.

RESULTS

Descriptive statistics indicated the respondents ranged from 19 to 61 years of age with a mean of 24. Fifty-two percent of the respondents were female.

Data was examined to profile the banking and behavior of the respondents. Respondents indicated having a checking account at one of 35 different banks. Results indicate that 55.3 percent of the respondents have held their checking account at their present bank between one and five years, 23 percent between six and ten years, 15.1 percent for less than one year, and 6.6 percent for greater than 10 years. Also, 80.4 percent of the respondents have used the teller service at their bank, 85.8 percent have used the ATM, and 72.4 percent have used the online banking service.

With the addition of online banking, the online behavior of the respondents was examined. Respondents frequently use the online banking service (mean = 4.17), checking their account balance online (95 percent) and paying their bills online (57.5 percent). The respondents surf the internet several times daily (72.4 percent), buy products on the internet (96.1 percent), are comfortable using the computer (mean = 4.72) and use the computer frequently in their daily life (mean = 4.73).

The reliability tests showed high Cronbach's alphas for the variables of interest, including teller encounter satisfaction (α = .87), ATM encounter satisfaction (α = .94), online encounter satisfaction (α = .91), and overall satisfaction (α = .91). Multiple regression analysis was conducted using the stepwise approach to determine the influence of teller encounter satisfaction, ATM encounter satisfaction, and online encounter satisfaction on overall satisfaction. The multiple regression results are shown in Tables 4(a) and 4(b). The results in Table 4(a) show that the overall model is significant ($F = 21.761$, $p < .000$), indicating that teller encounter satisfaction and online encounter satisfaction predict overall satisfaction. ATM encounter satisfaction was not entered into the model. Study Two results do not support the hypothesis that human encounter satisfaction is a stronger predictor of overall satisfaction than technological encounter satisfaction. The beta coefficients indicate that online encounter satisfaction ($t = 4.74$, $p < .000$, $\beta = .425$) has greater

weight than teller encounter satisfaction ($t = 3.05$, $p < .003$, $\beta = .274$) on overall satisfaction, although both play a role in overall satisfaction.

Table 4(a): Multiple Regression Results
Stepwise Approach

Model	F	Sig.	Beta	t	Sig.
[a] Overall Model	21.761	.000			
Online Satisfaction			.425	4.74	.000
Teller Satisfaction			.274	3.05	.003

[a] Predictor: Online Encounter Satisfaction, Teller Encounter Satisfaction
Dependent Variable: Overall Satisfaction

Table 4(b): Multiple Regression Results
Stepwise Approach

Model	R	R Square	Adjusted R Square	R Square Change	Significant F Change
1[a]	.502	.252	.244	.252	.000
2[b]	.567	.321	.306	.069	.003

[a] Predictor: Online Encounter Satisfaction
[b] Predictor: Online Encounter Satisfaction, Teller Encounter Satisfaction
Dependent Variable: Overall Satisfaction

As displayed in Table 4(b), both human encounter satisfaction (teller encounter satisfaction) and technological encounter satisfaction are associated with overall satisfaction, explaining 32.1 percent of the variance in overall satisfaction (R square = .321). The increase in the R square (.252 to .321) shows that both human and technological encounter satisfaction explains more variance in overall satisfaction than online satisfaction alone.

To further analyze the lack of contribution of ATM encounter satisfaction to overall satisfaction, another multiple regression analysis was conducted using the enter approach which forces all three proposed predictors into the regression model. The multiple regression results (see Table 5a) show that the overall model is significant ($F = 14.471$, $p < .000$), including the predicting variables of teller satisfaction, ATM satisfaction, and online satisfaction. Again, the beta coefficients indicate that online satisfaction ($t = 4.53$, $p < .000$, $\beta = .416$) and teller satisfaction ($t = 3.01$, $p < .003$, $\beta = .271$) are predictors of overall satisfaction. ATM satisfaction is non-significant ($t = 0.50$, $p = .619$, $\beta = 0.044$).

Table 5(a): Multiple Regression Results
Enter Approach

Model	F	Sig.	Beta	t	Sig.
[a] Overall Model	14.471	.000			
Teller Satisfaction			.271	3.01	.003
ATM Satisfaction			.044	.50	.619
Online Satisfaction			.416	4.53	.000

[a] Predictor: Teller Encounter Satisfaction, ATM Encounter Satisfaction, Online Encounter Satisfaction
Dependent Variable: Overall Satisfaction

Table 5(b): Multiple Regression Results
Enter Approach

Model	R	R Square	Adjusted R Square	R Square Change	Significant F Change
1[a]	.568	.323	.301	.323	.000

[a] Predictor: Teller Encounter Satisfaction, ATM Encounter Satisfaction, Online Encounter Satisfaction
Dependent Variable: Overall Satisfaction

As displayed in Table 5(b), teller satisfaction, ATM satisfaction, and online satisfaction together explain 32.3 percent of the variance in overall satisfaction (R square = .323). Appropriately, the total variance explained is relatively the same whether using the stepwise approach (32.1 percent) or the enter approach (32.3 percent).

ADDITIONAL ANALYSIS

Respondents were again grouped according to their preference of either self-service technology or service provided by a human being. Regression using the stepwise approach was run for each group. As in the previous regressions, ATM encounter satisfaction was not entered into the models. As a result, for the remainder of the paper, human encounter satisfaction will be represented by teller encounter satisfaction and technological encounter satisfaction will be represented by online banking service encounter satisfaction.

For those who prefer technological interaction, both human and technological encounter satisfaction impact overall satisfaction (see Tables 6a and 6b). Technological encounter satisfaction is more important ($t = 3.31$, $p = .002$, $\beta = .401$) followed closely by human encounter satisfaction ($t = 3.00$, $p = .004$, $\beta = .363$) (see Table 6a). As shown in Table 6(b), the addition of human encounter satisfaction increases the R square (from R square = .296 to R square = .408) and the R square change is significant (R square change = .111, F = .004).

Table 6(a): Multiple Regression Results
Technological Interaction Preference Group

Model	F	Sig.	Beta	t	Sig.
[a] Overall Model	16.509	.000			
Technological Satisfaction			.401	3.31	.002
Human Satisfaction			.363	3.00	.004

[a] Predictor: Technological Encounter Satisfaction, Human Encounter Satisfaction
Dependent Variable: Overall Satisfaction

Table 6(b): Multiple Regression Results
Technological Interaction Preference Group

Model	R	R Square	Adjusted R Square	R Square Change	Significant F Change
1[a]	.544	.296	.282	.296	.000
2[b]	.638	.408	.383	.111	.004

[a] Predictor: Technological Encounter Satisfaction
[b] Predictor: Technological Encounter Satisfaction, Human Encounter Satisfaction
Dependent Variable: Overall Satisfaction

Oddly, for those who prefer human interaction (service provided by a human being), human encounter satisfaction has no effect by not even entering the model ($F = 11.044$, $p = .002$). Technological encounter satisfaction is the only predictor ($t = 3.32$, $p = .002$, $\beta = .461$). Table 7a shows these results. Table 7(b) shows technological satisfaction alone explains 21.2 percent of the variance in overall satisfaction (R square = .212) for those who prefer human interaction.

Table 7(a): Multiple Regression Results
Human Interaction Preference Group

Model	F	Sig.	Beta	t	Sig.
[a] Overall Model	11.044	.002		3.32	.002
Technological Satisfaction			.461		

[a] Predictor: Technological Encounter Satisfaction
Dependent Variable: Overall Satisfaction

Table 7(b): Multiple Regression Results
Human Interaction Preference Group

Model	R	R Square	Adjusted R Square	R Square Change	Significant F Change
1[a]	.461	.212	.193	.212	.002

[a] Predictor: Technological Encounter Satisfaction
Dependent Variable: Overall Satisfaction

DISCUSSION

The purpose of the second study was to examine the impact of online encounter satisfaction on the relationship examined in Study One. Study Two demonstrates the impact of the online banking service encounter on overall service satisfaction. In this case, technological encounter satisfaction has greater impact on overall service satisfaction than human encounter satisfaction, counter to the findings in the first study. However, human interaction remains an important determinant in overall service satisfaction.

IMPLICATIONS

The purpose of the two studies was to examine the relative importance of human encounter satisfaction and technological encounter satisfaction on overall service satisfaction. Although technology may increase the number of encounters the customer has with the firm (Bitner et al. 2000), the human element is not to be ignored. With the prevalence of online communication and transactions, the pyramid model (Parasuraman and Grewal 2004 provides support for the importance of the dynamic relationship between employees, customers and technology (Bitner, Brown and Meuter 2000). The human encounter still plays a role but even for those who prefer it, the technological encounter is becoming even more important. Rising dependence on these technologies and the resulting increase in the number of encounters increases the importance of satisfaction with technological interactions on overall satisfaction with the firm.

The managerial implications of these findings indicate that service organizations should continue to pay attention to training their employees who have direct contact with their customers in order to improve their customers' overall satisfaction. However, satisfaction with technological communication is an indispensable and a significant predictor of overall satisfaction. Bitner, Brown and Meuter (2000) assert that offering both types of service encounters, technologically or interpersonally based, is critical to ensure the overall satisfaction of customers. Further, customers are contacting these service organizations through multiple channels so a plan for integrating service across channels is necessary (M.D.F 2007).

There are some limitations of this study that may have influenced the results. First, there is a concentration of ages due to the samples selected. Second, the study is geographically specific. Third, the study focused only on retail banking transactions. Future research may take other regions, ages and contexts into consideration. Further, usage was not measured in this study and may be examined in future research. The research would also benefit from examining the different predictors of satisfaction are for each of the channels customers utilize (van Birgelen et al. 2006; Zhang et al. 2006).

In sum, technological advances have allowed service organizations to offer its customers the convenience of self-service technology in addition to the personalized service of an employee. "Just as continual training and investment in front-line employees helps improve service delivery, self-service technologies must receive on-going maintenance to ensure continued effectiveness (Bitner, Brown and Meuter 2000, p. 59)." By enabling customers to select the type of service encounter they prefer, technological or interpersonal, they can experience the service as they desire, improving overall service satisfaction.

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