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MANUFACTURERS' REPRESENTATIVES: RELATIONSHIPS BETWEEN SELLING SUPPORT AND SATISFACTION

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ABSTRACT

Manufacturers may outsource the sales function for their products to manufacturers' representatives on an extended contract basis. These independently owned and operated firms work with several manufacturers by selling a portfolio of noncompeting product lines on a commission basis. An effective relationship with them is important because they are a primary link to customers for the manufacturer. Without appropriate selling support the sales performance desired from the representatives may not be achieved and it is possible that a representative will seek out an arrangement with a more suitable manufacturer. Different types of selling support were examined in this study to determine if the quality of it makes a difference in the representative's satisfaction and if some types of support have a greater impact on the their satisfaction. Hypotheses are advanced for testing the influence of three categories of support. In addition to testing the hypotheses, the relative influence of eight specific types of selling support on representative satisfaction is determined. Findings are discussed and areas for future research are suggested. The author wishes to thank the Manufacturers' Representatives Educational Research Foundation (MRERF) for supporting this research.

INTRODUCTION

Manufacturers may choose to outsource all, or part, of the selling function to independent firms, termed manufacturers' representatives, as a way to reach more customers, thus achieving sales objectives while also having the potential to reduce direct selling expenses. When relying on these firms to fulfill a boundary-spanning role, the manufacturer must provide adequate selling support because it influences a representative's ability to interact effectively with customers, on behalf of the manufacturer. By examining the quality of selling support in relation to the manufacturers' representative satisfaction, this study focuses on an area that has not received much empirical attention. Understanding the influence of support quality on the representative's satisfaction is important because, presumably, the manufacturer desires a long-term relationship with ongoing contract renewals to continue the interfirm relationship. For the remainder of this paper, manufacturers' representatives are referred to as MRs and the manufacturers are called principals, as commonly identified in the literature (Ross, Anderson & Weitz, 1997).

Study findings answer these questions: (1) Does the quality of sales support make a difference in the MR's satisfaction? and (2) Which types of support will have a greater impact on the MR's satisfaction? Despite practitioner interest in knowing how to interact effectively with representatives, the marketing literature has not fully explored this area of inquiry. Answering the two questions contributes to the marketing literature by explaining whether or not the quality of support matters and which types of support have greater influence on MR satisfaction. Previous literature examined differences between the best and worst manufacturer relationships with representatives (Sibley & Teas, 1979), conceptualized how the firms develop and maintain these relationships (McQuiston, 2001), described different approaches to structuring the relationships (Dishman, 1996) and reported how MRs evaluate principals (Merritt & Newell, 2001).

The importance of good interfirm relationships is recognized by these researchers and general factors contributing to their development have been identified (e.g., McQuiston, 2001). With the exception of Brown and Chin (2004), not much research on the effect of principal selling support has been completed even though many principals regularly decide on support to be provided and its quality. They examined principal's support in relation to MR satisfaction with support measured as the MR's perceptions of principal performance in brand building, lead generation, advertising support, and ability to maintain company awareness among end-customers. The current study complements this research by placing an emphasis on types of support that are different than ones they examined, with the exception of advertising support.

BACKGROUND

Some manufacturers choose to outsource because it allows them to focus on core competencies and reduce costs, thus achieving competitive advantages and beneficial bottom-line results. Benefits accrued to them when they accurately estimate costs and learn how to interact effectively with firms handling their vital business functions. Therefore, understanding how a principal's conduct influences a partnering firm has become paramount. Principals find this to be true as they regularly outsource functions such as research, human resources and customer service. They realize that building durable long term relationships requires an understanding of the other firm's needs. In addition, some functional areas have not been outsourced to a great extent because firms may not understand how to interact with a potential partner. For instance, outsourcing of the field sales function is not as common as the outsourcing of other functional areas. However, the activity is increasing as firms have found that MRs are readily available to perform the field sales function.

MRs work with several principals by selling a portfolio of noncompeting product lines on a commission basis. They perform the selling function on an extended contract basis and do not take possession, or ownership, of products. Firms taking this role have also been called independent agents or brokers. The most recent economic census (released 11/24/2009) reported they operate

45,458 US firms (2007 Economic Census) which is a substantial increase over 32,320 US firms reported in the previous census (2002 Economic Census)

Principals deal with a complex context of tradeoffs when working with MRs as all or part of the field selling effort. They benefit from the MR's sales experience, established customer contacts and the MR's ability to cover territories that are not served by a direct sales force. Principals also benefit by not having the same fixed costs required to staff and supervise a direct sales force. A tradeoff for the principal is less ownership of the customer relationship. As closer and more frequent interactions occur during the selling process, the MR may form customer bonds that are stronger than ones existing between customers and the principal. This tradeoff is significant because there is the possibility that a principal will lose customers if the MR switches to represent another principal. This could happen if the MR becomes dissatisfied with the relationship. Therefore, it is important for the principal to achieve a level of satisfaction with the MR to ensure a long term MR-Principal relationship. The quality of support they provided is important and noted when describing different ways a principal can become the "emotional favorite" of representatives and maintain their "share of mind" in order to obtain greater sales coverage (Agency Sales Magazine, 2006a; Agency Sales Magazine, 2006b).

Theoretically, a resource based view (RBV) and transaction cost analysis (TCA) explain the benefits of increasing MR Satisfaction. Based on RBV logic (Espino-Rodriguez & Padron-Robaina, 2006; Grant, 1991) there is less interfirm conflict when the MR is satisfied so end-customer relationships are more stable. In turn, the likelihood of an MR achieving acceptable sales performance is greater, thus enabling the principal to allocate more time on activities related to core competencies. This is more advantageous than the principal spending time managing and monitoring the MR, which TCA (Williamson, 1985) suggests would be needed because of uncertainty resulting from dissatisfying circumstances.

HYPOTHESES

Figure 1 depicts MR Satisfaction and three categories of support comprised of specific types of support that were examined to determine relationships between the MR's perceptions of support quality and satisfaction with the principal. MR Satisfaction is defined as the degree with which the representative is pleased with a principal overall and perceives that a principal provides beneficial programs and policies, treats the MR fairly and is good to be involved with in business. This definition, based on a scale used to measure satisfaction (Dwyer & Oh, 1987), reflects a description of channel member satisfaction as a "positive affective state resulting from the appraisal of all aspects of a firm's working relationship with another firm" (Geyskens, Steenkamp & Kumar, 1999, pg. 224). The three categories of support are: (1) sales planning support, (2) selling process support, and (3) administrative support. As shown in Figure 1, sales planning support includes the analysis of markets and case histories of accounts. Selling process support includes products delivery (i.e.

timely delivery), product training, technical support, product literature, and advertising. Administrative support is the timely payment of commissions to the representative.

Figure 1: Relationships Between Quality of Selling Support and MR Satisfaction
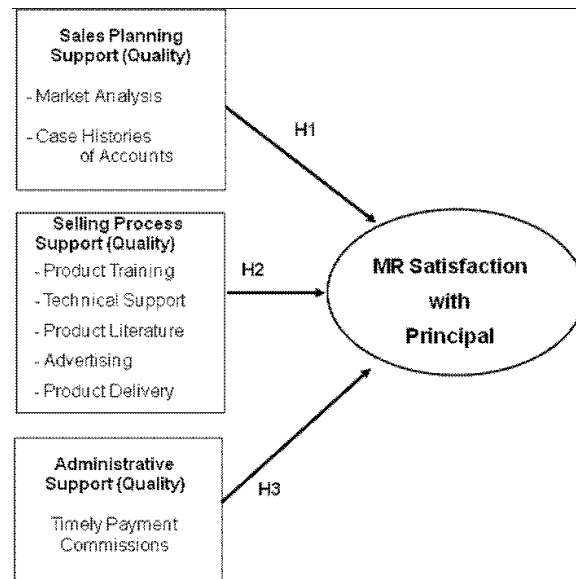
Of the three support categories (Figure 1), sales planning support and selling process support help improve an MR's ability to perform well when interacting with customers (i.e. the principal's end-customer). Knowledge and expertise related to the principal's end-customer result from sales planning and selling process support (e.g., analysis of customer markets, case histories of accounts, technical support, product training). The selling process undertaken by the MR is impacted by selling process support, including the timely delivery of products to customers, product training, technical support, product literature, and advertising. The types of support within each category are expected to be positively related to MR Satisfaction because they enhance the MRs expertise when contacting customers, performing the selling function and servicing customer accounts. As the quality of this support improves, MRs will more than likely be more motivated to allocate greater time and effort to represent the principal's products. The support increases their motivation so they have a greater interest level in representing the principal (Tyagi, 1985). As a result, commissions from sales performance increase and this leads to greater MR Satisfaction with the principal. Based on this reasoning, the following hypotheses are presented:

H1:   There is a positive relationship between the quality of sales planning support and the manufacturers' representative's satisfaction with the principal.

> *H2:*   *There is a positive relationship between the quality of selling process support and the manufacturers' representative's satisfaction with the principal.*

Path-Goal Theory of Leadership has been referred to when explaining the influence of rewards on channel member satisfaction (e.g., Price, 1991). It supports the idea that timely payments of commissions contributes to MR Satisfaction by suggesting that individuals are satisfied with leaders providing rewards associated with their performance. Since the MR relies solely on commissions to cover overhead costs and generate profit, the reward is not only the commission amount but also how quickly it is paid. Therefore, a positive relationship is expected between the timely payment of commissions and MR Satisfaction. This relationship is stated as:

> *H3:*   *There is a positive relationship between administrative support (i.e. timely payment of commissions) and the manufacturers' representative's satisfaction with the principal.*

METHODOLOGY AND RESULTS

A nationwide survey obtained MRs' perceptions of the quality of support provided by principals and their satisfaction with principals (i.e. MR Satisfaction). Members of the Manufacturers' Representatives Educational Research Foundation (MRERF) were randomly selected and offered an incentive to participate. The questionnaire was sent by fax to 2,000 owners and managers of MR firms with a chance to win $50 gift certificates valid at major retailers through several drawings. A total of 328 questionnaires were returned, after a second distribution via e-mail, thus yielding a 16.4% response rate. Respondents work with one to ten principals (64%), eleven to twenty principals (27%) or greater than twenty principals (9%). Annual sales volumes were reported at less than $5 million (45%), $5 million to $11 million (25%) and above $11 million (30%). Respondents worked with principals less than two years (18%), 3-10 years (48%), or greater than 10 years (34%). The cross-sectional survey included MRs from a variety of industries so the responses did not reflect opinions from one dominant industry.

MR Satisfaction was measured using a scale developed by Dwyer and Oh (1987) that was modified so items referred to relationships with principals instead of distributors. A five-point Likert type scale with Strongly Disagree (1) to Strongly Agree (5) anchors was presented with scale items. The scale exhibited satisfactory internal consistency with a Cronbach's alpha score of .93, thus exceeding the recommended level of .70 (Nunnally, 1978).

Principal Support Quality was assessed with a direct measure of each type of support. The eight types of support (Figure 1) were rated by asking respondents to indicate the quality of each type using a five-point Likert type scale with Poor Quality (1) to Excellent Quality (5) anchors. Respondents could also indicate if the principal did not provide the item of support. The types of

selling support were selected based on review of industry literature (e.g., Agency Sales, 2010; 2006a; 2006b; 1995a; 1995b; 1997; Abramson, 2001; Castro, 2001), discussions with practitioners and consideration of support provided to distributors (Cronin & Morris, 1989).

Table 1: MR Satisfaction and Principal Support Quality		
ITEM	Mean (n)	SD
Y_1-MR Satisfaction	3.39 (321)	1.16
Sales Planning Support		
X_1-Analysis of Markets	2.78 (316)	1.26
X_2-Case Histories	2.71 (316)	1.23
Selling Process Support		
X_3-Timely Delivery of Products	3.45 (322)	1.24
X_4-Product Training	3.16 (324)	1.34
X_5-Technical Support	3.33 (324)	1.29
X_6-Product Literature	3.52 (324)	1.27
X_7-Advertising	2.94 (326)	1.41
Administrative Support		
X_8-Timely Payment of Commissions	3.54 (315)	1.35

Table 1 shows mean scores and standard deviations for MR Satisfaction and perceived quality of the eight types of support. Regression analysis was used to examine relationships between each type of Principal Support and MR Satisfaction, thus testing hypotheses H1, H2, H3 with the equation: $\hat{Y}_1 = b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + b_5X_5 + b_6X_6 + b_7X_7 + b_8X_9 + b_0$. Table 1 shows each variable with its designation for this formula. The findings are reported in Table 2 and tests of H1, H2, and H3 were supported. All individual types of support were positively and significantly related to MR Satisfaction - with the exception of Product Training and Advertising. Therefore, one could say that H2 is partially supported. The regression results, reported in Table 2, do not include these two support items. Significant positive relationships were found with Market Analyses, Case Histories of Accounts, Timely Delivery of Products, Technical Support, Product Literature and Timely Payment of Commissions. Moreover, the level of variance, or R-square, in MR Satisfaction accounted for by all types of Support Quality is .691 with acceptable tolerance/VIF levels. In addition to revealing that the quality of these types of support account for 69.1 percent of the variance in MR Satisfaction, the relative impact of each is also shown. The standardized coefficients for Beta indicate that quality perceptions for the Timely Delivery of Products has the greatest

influence, followed by Technical Support Quality, Timely Payment of Commissions and the other types of support.

	b_0	X_1	X_2	X_3	X_5	X_6	X_8
Table 2: Influence of Support Quality on MR Satisfaction							
Adjusted R-square(n) .691(310)							
Beta Unstandardized	.276	.137	.147	.238	.196	.095	.150
Std. error	.131	.044	.046	.039	.044	.039	.036
t-value	2.10	3.09	3.19	6.07	4.42	2.39	4.17
p-value *Significant	.036*	.002*	.002*	.000*	.000*	.017*	.000*
Beta Standardized	------	.150	.156	.257	.219	.104	.175

DISCUSSION

Developing an effective relationship with the MR is important to the principal because an MR is the primary link to customers. A strong sales and profit incentive supports the need to know which types of sales support increase MR satisfaction. As previously noted, higher quality support may increase the MR's motivation, thus yielding greater interest in representing the principal (Tyagi, 1985). This additional attention could lead to more commissions from sales of the principal's products and even greater MR Satisfaction with the principal.

Study findings show that six types of support make a difference in the MR's Satisfaction, thus answering the first question stated in the Introduction. They also indicate which types of support should receive attention before others. The chief one is the Timely Delivery of Products and this makes sense because the end-customers are served by the MRs and commission generation is based on taking care of these customers. Higher quality Technical Support also enables the MR to take better care of customers and the Timely Payment of Commissions ensures the motivation, to do so, will continue. Both Market Analysis and Case Histories of Accounts are significant but relatively lower than the other types of support. This could be due to responses from MRs that have been serving principals longer and do not need this information. Similarly, the quality of product literature has the lowest impact on MR Satisfaction and this may be due to responses from MRs not using literature when calling on customers they know well. To develop higher quality sales support, it is important for principals to actively discuss, with the MR, the level of quality that will be provided. Managing the MR's expectations is crucial because MR Satisfaction will be influenced by the degree with which expectations for support are fulfilled. When support quality falls the MR's satisfaction with the principal will, more than likely, decline.

The analysis of selling support and MR Satisfaction completed in this study will hopefully stimulate discussion that will advance research activity in this area. It would be beneficial to explore

the perspective of principals to determine if their perceptions align with those reported by MRs in this study. Perceptions of end-customers could also be obtained and compared to these findings. Although not within the scope of this study, these are contexts which could yield a better understanding of factors leading to greater MR Satisfaction. One could also study the influence of selling support quality on MR Performance, thus developing a fuller picture of how the support and MR Satisfaction with it ultimately impacts performance. Another area to explore is how the MR's perceptions of support and relationships with MR Satisfaction are moderated by factors such as the degree of dependence on the MR-Principal Relationship, length of the relationship and industry conditions.

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MARKET FOCUS IN AACSB MEMBER SCHOOLS: AN EMPIRICAL EXAMINATION OF MARKET ORIENTATION BALANCE AND BUSINESS SCHOOL PERFORMANCE

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ABSTRACT

This manuscript reports the results of a national survey examining the magnitude and balance of market orientation toward students, parents, and employers of graduates exhibited in AACSB member schools. We reword Narver and Slater's (1990) "market orientation" scale and Jaworski and Kohli's (1993) "overall performance" scale for use within the higher education context. We group respondents into clusters based on their market orientation component scores. Each cluster thus represents a unique combination of market focus (or lack of focus) on students, parents, and employers of graduates typically employed by AACSB member schools. We examine and report magnitude and balance of market orientation toward the three markets, balance of emphasis between the market orientation components, relative emphasis of customer orientation and competitor orientation, and overall business school performance for each cluster. Additionally, we employ t-tests to identify significant differences in overall business school performance exhibited by the clusters.

We outline the objectives of the study in terms of research questions, complete the analysis that addresses the questions, and present results and implications. Study limitations and future research directions are provided.

INTRODUCTION

The Baldrige National Quality Program (BNQP) has established the *Baldrige Education Criteria for Performance Excellence* for universities and other educational organizations, and includes a "student, stakeholder, and market focus category" (BNQP 2005) among the criteria leading to performance excellence. This particular category of criteria suggests that organizations identify potential market segments and determine which ones to pursue, then take steps to learn "key requirements and changing expectations," build relationships, increase loyalty, and determine satisfaction/dissatisfaction of those student/stakeholder markets. The focus category also emphasizes the importance of strategic decisions regarding the extent that university business schools may choose to focus on particular markets, and the balance of focus between chosen markets. These decisions may obviously contribute to the culture of the school, encouraging or discouraging attentiveness to students and potential students, parents of

students, future employers of graduates, and other student/stakeholder markets. Market selection and other applications of marketing theory by practitioners within higher education are appropriate and should certainly be beneficial; Kotler and Levy (1969a, 1969b) argued successfully for broadening the scope of marketing (and the marketing concept) to include higher education as well as other nonbusiness organizations.

This manuscript reports the results of an empirical study examining magnitude of focus and balance of focus on three markets (students, parents of students, and employers of graduates) within AACSB-affiliated schools of business. We empirically identify groups (clusters) of schools that exhibit similar focus on market orientation components for the three markets. We report final cluster centers and other information regarding the cluster analysis, then calculate and report mean levels of overall market orientation and performance for each cluster. We also provide percentages reflecting the balance among the components (Narver and Slater 1990), and relative emphasis (between customer and competitor) measures, as described by Slater and Narver (1994). Finally, we examine any differences that may exist in overall business school performance between the clusters.

DISCUSSION AND LITERATURE REVIEW

BNQP (2005) incorporates behaviors and actions indicative of high levels of market orientation as described in the marketing literature (Jaworski and Kohli 1993; Kohli and Jaworski 1990; Narver and Slater 1990; Slater and Narver 1994) throughout the education criteria for performance excellence. Further, the marketing literature (Barksdale and Darden 1971; Houston 1986; Jaworski and Kohli 1993; Kohli and Jaworski 1990; Narver and Slater 1990; Siguaw, Brown, and Widing 1994) supports assertions by practitioner-oriented publications such as the *Baldrige Education Criteria for Performance Excellence* (BNQP 2005) that these behaviors and actions result in a greater ability of the organization to achieve its objectives and attain higher levels of performance. The term "market orientation" refers to the extent that an organization uses the marketing concept; Kohli and Jaworski describe the processes required to engender a market orientation as a "distinct form of sustainable competitive advantage" (1990, p. 17). They state that market orientation consists of "the organizationwide generation, dissemination, and responsiveness to market intelligence" (1990, p. 3). Narver and Slater agreed with Kohli and Jaworski, proposing three behavioral components (customer orientation, competitor orientation, interfunctional coordination) that "comprehend the activities of marketing information acquisition and dissemination and the coordinated creation of customer value" (1990, p. 21).

This study is an extension of previous research (Hammond, Webster, and Harmon 2006), which provided a comparison of the market orientation components to criteria for performance excellence described in the *Baldrige Education Criteria for Performance Excellence* (BNQP 2005). Specifically, the criteria require that an educational organization maintain an awareness of and act on the current and future needs of its customers and other stakeholders. They also require the organization to know its strengths, weaknesses, and performance levels relative to competitors, and to support a coordination of effort throughout the organization (toward creating, delivering, and "balancing" customer-stakeholder value and toward achieving high levels of customer-stakeholder satisfaction). The criteria further require

an organizationwide effort to gather, disseminate, and act on information regarding the requirements, expectations, and preferences of students and other stakeholders. The *Baldrige Education Criteria for Performance Excellence* (2005) suggests that students are the key customers of higher education, and suggests that parents and employers of graduates can also be considered "customers" or "stakeholders."

This study is an extension of previous research study, which indicated, in part, statistically significant positive correlations and statistically significant regression models demonstrating a positive causal impact of market orientation on overall performance of the business school in the case of students, parents, and employers of graduates. That stream of research was extended by examining the balance of focus that AACSB member schools place on students, parents, and employers.

RESEARCH QUESTIONS

We realize that each individual school makes its own determinations as to the markets that they choose to pursue, and the level of importance that they place on those markets. However, similar strategies and similar combinations of market focus may exist among certain of the schools. The unique combinations of focus used by some groups of schools may be more effective than those used by others. Magnitude of focus on particular markets and relative balance of focus between markets hopefully reflect well-conceived decisions regarding the strategic intent of the school and, over time, become an integral part of the culture of the school. As discussed above, the result of high levels of market orientation toward well-chosen markets should be high levels of performance.

Though part of a larger effort, the focus of this study is limited. Accordingly, we address a limited number of research objectives surrounding the magnitude and balance of market orientation exhibited by AACSB-affiliated business schools in the United States toward three general student/stakeholder markets (students, parents, employers of graduates). The objectives are expressed below in terms of four research questions.

> *Are any particular combinations of market focus (or lack of focus) on students, parents, and employers of graduates typically employed by AACSB-affiliated business schools?*

If the answer is affirmative, . . .
> how are the combinations described in terms of magnitude and balance of market orientation exhibited toward the three markets, balance of emphasis between the market orientation components, and relative emphasis of customer orientation and competitor orientation?
> what performance levels are demonstrated by the clusters of schools that exhibit these identified combinations of market focus on students, parents, and employers of graduates?

are performance levels statistically significantly different between the different clusters of schools that exhibit different combinations of market focus on students, parents, and employers of graduates?

Previous researchers and practitioners agree that higher levels of market orientation lead generally to higher levels of performance. They also call for further research to help identify the "optimal degree of market orientation" (Narver and Slater 1990, p. 33) which may not be (in every situation) the absolute highest levels. Research is also needed to help schools identify their most appropriate balance of market focus toward the various student/stakeholder markets, as discussed by BNQP (2005). The results of this study address these issues empirically for AACSB member business schools by answering the research questions.

METHODOLOGY

We address the research questions through k-means cluster analysis, calculation and examination of mean scores for market orientation and overall performance within each identified cluster, and application of t-tests. Specifically, five clusters of respondents are formed based on levels of market orientation components exhibited toward students, parents, and employers of graduates. Means are then calculated within each cluster for market orientation, and scores are calculated indicating balance of the market orientation components. Finally, overall performance means are calculated per cluster and compared using t-tests.

Data for the study were collected utilizing a mailed survey. Survey instruments with a cover letter were mailed to Deans of 604 schools of business located in the U.S. Schools were selected based upon membership in AACSB-International. As key informants (Campbell 1995; Phillips 1981), the Deans were asked to complete the surveys and return them in the business reply envelopes provided. Of the total survey instruments mailed, 141 were completed and returned. The response rate was 23%. Data for market orientation and for overall performance of the business schools were gathered from the respondents utilizing scales. Anticipating that some respondents may have difficulty with the concept of students, parents, and employers as markets (or customers or even stakeholders) of higher education, we do not use those terms in the survey. We simply refer to students as students, parents as parents, and employers as employers. We also avoided the terms marketing, marketing concept, and market orientation in the survey and the cover letter.

To measure market orientation, we chose Narver and Slater's (1990) construct (MKTOR), which consists of several questions addressing specific behaviors and activities which, together, measure the extent that the organization (university, in this case) applies the marketing concept. The scale addresses concerns raised by Barksdale and Darden (1971) that market orientation is properly measured in terms of behaviors and activities instead of "philosophical notions." A seven point response scale is used ranging from one (1) "not at all" to seven (7) "to an extreme extent." Scores above the midpoint (4.0) indicate application by the respondent of the marketing concept; scores below the midpoint indicate a lack of application by the respondent. Questions from the original scale were modified somewhat to

conform to the vocabulary prevalent in academic institutions and, as noted above, to avoid referring to students, parents, and employers as "markets" or "customers." We combine the questions to form three subscales that measure the market orientation components (customer orientation, competitor orientation, interfunctional coordination), matching Narver and Slater's methodology. The subscales combine to form an overall measure of market orientation, also matching Narver and Slater's methodology.

"Overall performance" is measured using the subjective Jaworski and Kohli (1993) two-item measure that is based on executive opinion of performance. No specific performance goals are assumed for the respondents. Each respondent is requested to answer the two questions about actual recent overall performance relative to the expectations and performance goals of that particular business school. Possible responses on the seven point response scale range from poor (1) to excellent (7). Slater and Narver (1994) defend the use of subjective performance measures, noting that the measures "are used commonly in research on private companies or business units of large corporations" (p. 51). They also note the "strong correlation between subjective assessments and their objective counterparts" (p. 51) that has been indicated in previous research.

The market orientation scales were subjected to reliability analysis, exploratory factor analysis, and confirmatory factor analysis prior to further analysis (Churchill 1979; Peter 1979; Bagozzi and Yi 1988; Anderson and Gerbing 1988; Gerbing and Anderson1988). The scales are indicated to be reliable (with alphas ranging from .74 to .93 and item-to-total correlations from .43 to .85). Exploratory factor loadings range from .3 to .9. The confirmatory analysis results are favorable for market orientation toward students (CMIN/DF 1.944, TLI .866, CFI .903, RMSEA .082), toward employers (CMIN/DF 3.237, TLI .967, CFI .976, RMSEA .100), and toward parents (CMIN/DF 2.440, TLI .863, CFI .901, RMSEA .101). The Pearson correlation coefficient for the two overall performance items is .708 (sign. .000), indicating reliability for this two-item scale.

The possibility of nonresponse bias was investigated by comparing early and late respondents (Armstrong and Overton 1977). The tests indicated no significant differences between early and late respondents (at the .10 level of significance). Also, Berdie (1989) found that, even in the event of nonresponse bias in mail surveys, typically the bias did not alter the survey findings. We proceeded on the basis that significant nonresponse bias did not exist.

RESULTS

The results of this study accomplish the objectives by providing answers for the research questions. The answer to the first question is in the affirmative; unique combinations of market focus on students, parents, and employers are identified within AACSB-affiliated schools of business and are grouped in this study into five clusters of respondents. These unique combinations per cluster are then described in terms of magnitude and balance of the market orientation components, and relative emphasis of customer orientation to competitor orientation. Finally, addressing the third and fourth research questions, performance levels are provided and compared for each cluster.

Specifically, we performed k-means cluster analysis in order to identify the unique combinations of market orientation components most typically employed by AACSB member schools. The five-cluster

solution is presented and described in terms of overall market orientation levels, overall performance, and balance of components. T-tests compared mean performance levels of the five clusters. Statistically significant differences are identified and presented below.

Since all nine market orientation components were measured in the same way, we did not standardize the measures prior to performing the cluster analysis. The final cluster centers (Table 1) represent the means for each variable in the five clusters. The size of the F-statistic (Table 1) indicates the relative strength of the variable in determining cluster membership. Distances between final cluster centers indicate relative distances in multidimensional space between the clusters.

As shown in Table 1, note that Cluster 1 is the smallest group, with only five respondents. Notably, members of Cluster 1 exhibit mean levels for all nine market orientation components that are the highest of all clusters. Cluster 2, with 34 respondents, has mean levels that are the lowest of all clusters for all of the market orientation components. The other clusters exhibit market orientation levels that fall between these two extremes. Cluster 3 (the largest group, with 54 respondents) exhibits the second lowest levels of eight of the components (excluding parent customer orientation). Cluster 4 (16 respondents) is the second highest on all components of market orientation toward students and toward employers. Members of Cluster 5 (22 respondents) demonstrate the second highest mean levels of all components of market orientation toward parents.

A careful review of the tables reveals specific insights that can be gained from the results of the study. As noted above, generally, schools with higher levels of market orientation demonstrate higher levels of performance (Tables 1 and 2). However, each progressively higher level of market orientation exhibited by the clusters of respondents in this study does not reveal a corresponding higher level of performance for any of the market orientation components, or for overall market orientation in the case of any of the markets.

Interestingly, the schools in Cluster 1 do not have the highest mean performance score in spite of high market orientation scores (Tables 1 and 2). Cluster 1, in fact, has the second lowest mean score for overall performance. While this result is not expected from the theory discussed above, the component balance and relative emphasis measures may provide some insight. Due to very high competitor orientation toward students and parents, the balance and relative emphasis measures for Cluster 1 are skewed toward competitor orientation more than is exhibited by any of the other clusters. The lowest performing group (Cluster 2), which has the lowest market orientation scores for all components, also demonstrates balance measures that are skewed in the cases of students and employers. This skew, however, is away from competitor orientation and toward customer orientation.

Clusters 3, 4, and 5 demonstrate higher performance scores than Clusters 1 and 2, and also demonstrate more moderate balance measures for the market orientation components of students and employers. Clusters 4 (the highest performing group) and 5 (the second highest performing group) do exhibit dramatically different strategies from each other (and from the other clusters) toward the parent market. Second highest on market orientation toward students and employers, Cluster 4 ranks third (of five clusters) on market orientation toward parents and is heavily skewed toward competitor orientation for the parent market. Respondents in Cluster 5 (with the second highest mean scores for all components

of market orientation toward parents) exhibit more balance between components of market orientation toward parents than found in any other cluster.

Table 1: K-Means Cluster Analysis of AACSB Member Business Schools Five Cluster Solution Based on Market Orientation Component Levels						
	ANOVA	Final Cluster Centers (Means)				
	F statistic	Cluster 1	Cluster 2	Cluster 3	Cluster 4	Cluster 5
		n=5	n=34	n=54	n=16	n=22
Market Orientation toward Students						
Competitor Orientation	69.886	6.2	2.5	3.56	4.66	4.6
Interfunctional Coordination	71.333	6	2.81	4.19	4.99	4.93
Student Customer Orientation	36.933	5.93	3.46	4.46	5.52	5.39
Market Orientation toward Parents						
Competitor Orientation	77.703	6.2	2.21	3.29	4.16	4.41
Interfunctional Coordination	90.06	5.52	2.26	3.67	3.8	4.66
Parent Customer Orientation	53.553	4.87	1.5	2.68	2.03	3.96
Market Orientation toward Employers of Graduates						
Competitor Orientation	92.153	6.05	2.34	3.62	4.81	4.65
Interfunctional Coordination	67.26	5.57	2.59	3.91	5.21	4.58
Employer Customer Orientation	44.459	5.73	2.87	3.94	5.48	4.68
Distances Between Final Cluster Centers						
Cluster	1	2	3	4	5	
1		9.937	6.400	4.525	3.577	
2	9.937		3.622	6.316	6.477	
3	6.400	3.622		3.103	2.906	
4	4.525	6.316	3.103		2.369	
5	3.577	6.477	2.906	2.369		
Note: Ten respondents were excluded from the analysis due to missing items. 131 cases are included in the analysis.						

Table 3 reveals which clusters of the respondent AACSB business schools exhibit statistically significantly different levels of performance. Note that, applying the Bonferroni inequality, we calculate that a required .10 significance level becomes .010 given the ten tests performed in addressing this research question.

From Table 3, observe that the lowest performing group (Cluster 2) has a mean score on overall performance of 4.82, which is statistically significantly lower (applying the .010 significance level as discussed above) than the mean scores exhibited by the two highest performing groups (Clusters 4 and 5 with 5.91 and 5.64 performance scores, respectively).

Table 2: Selected Measures per Cluster: Overall Performance, Overall Market Orientation, Market Orientation Component Balance (Proportion of Total), and Relative Emphasis (Customer Orientation / Competitor Orientation)					
	Cluster 1	Cluster 2	Cluster 3	Cluster 4	Cluster 5
	n=5	*n=34*	*n=54*	*n=16*	*n=22*
Overall Performance	5.3	4.82	5.31	5.91	5.64
Overall Mkt. Orientation toward Students	6.04	2.92	4.07	5.05	4.97
Mkt. Orientation Component Balance					
- Competitor Orientation – Students	34.20%	28.50%	29.20%	30.70%	30.80%
- Interfunctional Coordination – Students	33.10%	32.10%	34.30%	32.90%	33.00%
- Customer Orientation - Students	32.70%	39.40%	36.50%	36.40%	36.20%
Relative Emphasis (Cust/Comp) - Students	0.957	1.382	1.252	1.186	1.172
Overall Mkt. Orientation toward Parents	5.53	1.99	3.21	3.33	4.34
Mkt. Orientation Component Balance					
- Competitor Orientation - Parents	37.40%	37.10%	34.20%	41.60%	33.80%
- Interfunctional Coordination - Parents	33.30%	37.80%	38.00%	38.10%	35.80%
- Customer Orientation - Parents	29.30%	25.10%	27.80%	20.30%	30.40%
Relative Emphasis (Cust/Comp) - Parents	0.785	0.676	0.814	0.489	0.899
Overall Mkt. Orientation toward Employers	5.78	2.6	3.82	5.17	4.64
Mkt. Orientation Component Balance					
- Competitor Orientation - Employers	34.90%	30.00%	31.60%	31.00%	33.40%
- Interfunctional Coordination – Empl.	32.10%	33.20%	34.10%	33.60%	32.90%
- Customer Orientation - Employers	33.00%	36.80%	34.30%	35.40%	33.70%
Relative Emphasis (Cust/Comp) – Empl.	0.948	1.226	1.088	1.139	1.007

IMPLICATIONS

Results support the suggestion from *Baldrige Education Criteria for Performance Excellence* (BNQP 2005) that educational organizations should identify the student/stakeholder market segments that they wish to pursue, and then strategically determine the appropriate balance of focus for those markets. Obviously, AACSB member schools place differing levels of emphasis on students, parents, and employers. They may employ strategies that incorporate all markets equally, stress some markets over others, or emphasize other factors and give little attention to the various student/stakeholder markets. The schools may also incorporate the three market orientation components for those markets differently within their overall strategy. They could, for example, choose to emphasize customer orientation much more than competitor orientation for a particular market. Each AACSB member school

should emphasize the processes of developing, implementing, and monitoring its market focus strategy. Results of this study indicate that some common strategies are more effective than others.

Table 3: Comparison of Mean Performance Levels by Cluster (Five Cluster Solution Based on Market Orientation Component Levels)				
Cluster Number	N	Mean Performance	t	Significance
1	5	5.3	1.038	0.306
2	33	4.82		
1	5	5.3	-0.03	0.976
3	53	5.31		
1	5	5.3	-1.359	0.19
4	16	5.91		
1	5	5.3	-0.984	0.334
5	22	5.64		
2	33	4.82	-2.518	0.014
3	53	5.31		
2	33	4.82	-3.712	0.001
4	16	5.91		
2	33	4.82	-3.38	0.001
5	22	5.64		
3	53	5.31	-2.511	0.014
4	16	5.91		
3	53	5.31	-1.656	0.102
5	22	5.64		
4	16	5.91	1.058	0.297
5	22	5.64		

The results also support Narver and Slater's (1990) assertions that, though high levels of market orientation are to be recommended for greater performance, the causal effect may not be purely linear. Ideal levels may exist below the maximum for certain types of organizations or certain situations. The few respondents in this study in Cluster 1 demonstrate the highest levels of market orientation but not the highest levels of performance. The slightly more moderate (perhaps more focused) approaches of the respondents in Clusters 4 and 5 generate higher levels of performance.

While the few respondents in Cluster 1 may arguably be too market oriented, the majority of respondents (Clusters 2 and 3) are actually at or below the midpoint on market orientation toward all three markets, and are not performing particularly well. These schools should increase their market orientation, focusing their attention on at least one of their possible markets. This conclusion is

emphasized by previous results (Authors 2008), which indicated significantly lower levels of market orientation in higher education compared to results within studies of business.

Following the discussion above, market focus strategy should be well considered and intentional (not accidental). Perhaps, market focus considerations (emphasis/de-emphasis of selected markets and selected market orientation components) are intentional parts of strategy and organizational culture at every AACSB member school. Yet, the market focus (or lack of it, as in in Cluster 2) exhibited by schools may very well reflect behaviors and actions on the part of faculty, staff, and administration that do not reflect the intended focus of the school. This could occur if schools allow market focus or lack of focus to simply evolve, with no intended purpose.

The results of this study and the implications outlined above provide guidance for AACSB member schools regarding market focus strategy development. Markets should not be ignored and some focus strategies do appear to be more effective than others. The study should be encouraging and useful for schools that already exhibit high levels of market focus toward their student/stakeholder markets, and should be particularly helpful for schools that are not currently focusing on their markets. Schools should be able to improve their performance if they achieve generally high levels of market orientation and greater attention to their market focus strategy, as explained by *Baldrige Education Criteria for Performance Excellence* (BNQP 2005), Kohli and Jaworski (1990), and Narver and Slater (1990). As discussed above and supported by the results of this study, market focus is among the criteria leading to "performance excellence." The *Baldrige Education Criteria for Performance Excellence* (BNQP 2005) suggests that schools employing the criteria should expect improvements in several key areas of organizational performance, relative to competitors and comparable organizations. These key areas of performance improvement include student learning, student and stakeholder satisfaction and perceived value, market share and new market development, collaboration and information sharing across work functions and units, faculty and staff satisfaction and retention, effectiveness and efficiency of processes for improvement of student performance, and effectiveness of senior leaders. Note that these dimensions of performance may or may not have been considered by the survey respondents when providing their assessment of overall business school performance.

The study adds to the research stream of the authors (Authors 2006; Authors 2008) which successfully applies Narver and Slater's (1990) reworded market orientation scale. Obviously, this result is not necessarily limited to university schools of business; the reworded market orientation scale can be applied to other units within higher education. Also, the result further validates the Narver and Slater (1990) scale, supporting its application to a variety of contexts.

STUDY LIMITATIONS AND FUTURE RESEARCH DIRECTIONS

We argue above that the findings of this study of AACSB schools of business in the United States can be generalized to others within higher education. We urge caution, however, in applying the findings due to the limitations of the sampling frame (AACSB member schools, located in the United States). Also, we surveyed business school deans only. Employees at other levels of the organization (vice presidents or vice chancellors for academics, department chairs, faculty) may have different perceptions

that would result in different business school market orientation scores and different overall performance scores. Accordingly, results of the study might be different if examined from one of these other levels of the organization. The limitations of this study present an opportunity for further research; the study could be repeated at the other levels of the organization, or in other contexts, and findings could be compared. Findings of this study could be strengthened or moderated by repeated studies at other levels of education and in other contexts.

Another limitation of the study is the use of one subjective performance measure. Future research investigating the magnitude and balance of market orientation and its impact on performance within higher education would be strengthened by the use of multiple performance measures, to include objective measures. A recent study of the hospitality industry (Haugland, Myrtveit, & Nygaard 2007) notes different results in measuring the impact of market orientation on performance when the performance measures are objective rather than subjective. Future researchers should investigate whether or not differences exist for market orientation within higher education.

As discussed by Narver and Slater (1990) and Slater and Narver (1994), further research is needed to explore whether equality (balance) or inequality (skewness) of the three market orientation components affect performance. Similarly, future research could examine the possible effects of relative emphasis (customer orientation/competitor orientation) on performance.

We did not consider organizational characteristics such as size of the business school, public/private classification, or highest degree offered within the business school. These characteristics might impact the variables or the relationships between the variables that we examined. Also, as noted in the *Baldrige Education Criteria for Performance Excellence* (2005), segments of students and other stakeholders could be considered individually. Studies surrounding the actions, behaviors, and performance results within higher education for specific student/stakeholder segments could provide findings and insights that might otherwise be missed.

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PROFESSIONAL WOMEN'S VARIETY-SEEKING BEHAVIOR IN FASHION CLOTHING: NEW YORK CITY AND LONDON

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ABSTRACT

This paper examines the impact of self construal, attention to social comparison information (ATSCI), and conformity motivation on professional career women's variety seeking in fashion clothing choices. An important contribution of this research is the extension of the focus on the relationship between ATSCI and motivation to conform, well beyond previous research findings. A sample of 207 professional women aged 21-50 living in London and New York City were surveyed by online questionnaire.

A partial least squares (PLS) path analysis found that interdependent self construal had a strong and positive relationship with ATSCI, which was positively related with motivation to conform. Independent self construal was negatively related to conformity motivation, which in turn, was negatively related to variety-seeking in women's clothing choice behavior. Discussions of findings are also presented to shed some light in professional women's consumer behavior in the area of fashion marketing.

Keywords: Variety-seeking in fashion clothing, self construal, attention to social comparison information and clothing conformity

INTRODUCTION

According to Solomon and Rabolt (2004), fashion is "a form of collective behavior, or a wave of social conformity" (p.19) and refers to "a style that is accepted by a large group of people at a given time" (p.6). Fashion has been defined by Sproles (1979) as a behavior temporarily adopted by most members of a social group based upon a sense of appropriateness for the time and situation. New culturally integrated styles and behaviors lead to commonly shared experiences within a society that in turn effect changes in cultural variables (Thompson and Haytko, 1997). The modernization process has led to attitudinal changes, enabling consumers to become less critical in their self-evaluations, more open to new ideas, as well as developing positive attitudes toward self-expression and individuality (Murray, 2002; Thompson and Haytko, 1997).

The dissemination of women's attire styles, fashions and brands is now virtually instantaneous rather than sequential (Hamilton, 1997). Fashion styles change quickly (Miller-Spillman, Damhorst and Michelman, 2005) and, as a consequence, new meanings attributed to such styles may become inconsistent with the self(Miller, McIntyre and Mantrala, 1993). Consumers adopt new styles with new meanings in large part in order to maintain coherent identities (Piamphongsant and Mandhachitara, 2008). Fashion clothing has always been a strong reflection of social, cultural identity, and social class membership (Au, Taylor, and Newton, 2000). In postmodern times, multiple styles of fashion clothing may be found in trend during the same period (Hamilton, 1997), for example, short and long skirts may be concurrently "in" (Miller-Spillman et al., 2005). The perennial pants suites still enjoy wide acceptance status among professional women dressers, particularly at work.

The global expansion of media companies, particularly women's magazines, facilitates the dissemination of similar fashion information to their target audiences on a contemporaneous basis. The Internet has accelerated this process (Maynard, 2004), and at the same time, there has been an increase both in the number of women in the workplace and in those holding higher ranking positions, permitting them to become more individualistic (Arkin and Bentley, 1995; Entwistle, 2000). At a more personal level, other influences that may affect women's fashion clothing behavior include the concept of self-construal, the level of public and social awareness, as well as the motivation to conform to group norms.

This study examines women's fashion clothing preference and variety-seeking behavior in dressing styles among female professionals working in New York City and London. In the next section, the relevant literature is reviewed, followed sections relate to research methodology, data analysis and its findings, together with a discussion of the results and managerial contributions.

THEORETICAL BACKGROUND

This section reviews constructs relevant to women's tendency to exercise variety-seeking behavior in fashion clothing decisions.

Variety-Seeking Behavior in Fashion Clothing

McAlister and Pessemier (1982) report that variety-seeking can be derived by variations in external forces, namely, the multiple needs and changes in the choice problem and direct variations that are associated with internal or personal attributes. 'Multiple needs' includes multiple users where the variation of product choices is dependent upon the members of a group; multiple situations where behaviors vary by situation; and multiple uses where the products are used for several purposes in certain situations (Laurent, 1987). Hence, behavioral variety is influenced by differing conditions created by specific groups, social situations, and identity development, as well

as other external factors including new product information, advertising, and internal factors such as place of residence, age, wealth, and free time availability. Furthermore, changing behaviors may also be triggered by intrapersonal motives and the desire for unfamiliar alternatives, for alternating among familiar alternatives, and for information (McAlister and Pessemier, 1982). When clothing is employed to establish autonomy and/or is affiliation seeking, its underlying purpose is to foster identity development (Cheng, Hines and Grime, 2008; Cskikszentmihalyi and Rochberg-Halton, 1981; Mittal, 2006). Thus, it would seem that both individuals with an independent self who seek distinctiveness and individuals with an interdependent self who seek group affiliation, are both variety-seekers.

For the purposes of this paper, variety-seeking behavior refers to the degree of women's actual behaviors in varying clothing options for use in different situations, specifically work, party and leisure. Therefore variety-seeking behavior is regarded as *individual variety in dressing styles*. Variety-seeking behavior gives rise to impression formation (Cskikszentmihalyi and Rochberg-Halton, 1981) through social conformity or nonconformity, by using similar or unique products. A woman may reduce variety-seeking behavior in professional situations when social cues exist to reaffirm appropriate styles for less diversity (Ratner and Kahn, 2002). However, if an individual is low in variety-seeking in all situations, they are often motivated by independence and will follow internal tastes and be consistent with personal standards (Tepper, Bearden and Hunter, 2001). Sometimes, these individuals may not be aware of a particular social norm and act simply according to their taste , that is, they are *truly independent* (Horn and Gurel, 1981). Also when a possession is not used for identity management, it is said to be utilitarian which, as demonstrated by Kleine, Kleine and Kernan (1993), is associated with liking. Strongly independent individuals may use clothing merely for utilitarian purposes which constitute the opposite end of the variety-seeking continuum.

Antecedents of Professional Women's Variety in Dressing Styles

Independent and Interdependent Self-Construal

Self-construal refers to how individuals define or construe themselves in relation to others (Markus and Kitayama, 1991). Self-construal has been shown to relate to self-representation (e.g. Brewer and Gardner, 1996; Gardner, Gabriel and Lee, 1999). Self-construal may be varied when an individual responds to other factors, such as situational accessibility and reference points (Brewer and Gardner, 1996; Trafimow, Triandis, and Goto, 1991). For example, an individual tends to define "who am I?" (Kuhn and McPartland, 1954) differently when he/she is either "at home" or "at school" (Aaker and Lee, 2001).

The concept of self-construal has been demonstrated to be one of the key determinants of the level of an individual's independence and interdependence (Grace and Cramer, 2003). The

measurement of self-construal was developed by Singelis (1994) and involves an individual's thoughts, feelings, behaviors and the self vis-à-vis relationships to others, including the separation of the self from others. However, few studies have investigated the influence of self-construal on consumer behavior and their relationship to consumer decision making process (Youn Hahn and Kean, 2009).

The independent self-concept focuses on one's own individual concerns with expressing to others' unique internal attributes and enhancing a self image that is congruent with the self (Abe, Bagozzi and Sadarangani, 1996; Singelis, 1994). A person with an independent self is likely to have clearly distinguishable boundaries between the self and others, and will tend to prioritize and be driven towards achievement of personal goals over group goals (Grace and Cramer, 2003; Lalwani and Shavitt, 2009; Markus and Kitayama, 1991, 2003; Singelis, Bond, Sharkey, and Yui Lai,1999). Independent self-construal has been found to be a significant driver in the consumption of high-end luxury goods in Korea (Youn Hahn and Kean, 2009).

The interdependent self-concept is focused on an individual's relationship with others and concerns with controlling the internal attributes and promoting contributions to group welfare (Abe et al., 1996). Individuals exhibiting interdependent self-construal emphasize giving and receiving social support, which can be adjusted as necessitated by situational demands (Abe et al., 1996). They are more likely to define themselves in terms of their relationships to others and tend to prioritize and be driven towards the achievement of group goals over personal goals (Grace and Cramer, 2003; Markus and Kitayama, 1991, 2003; Singelis et al., 1999). They also tend to respond to cognitive and behavioral patterns that promote connectedness and relationships (Cross, Bacon, and Morris, 2000). Interdependent self-construal is associated with greater interpersonal sensitivity, responsiveness and caring. Therefore, individuals with interdependent self-construal tend to be likely to consider the consequences of their decisions on others (Cross et al., 2000).

Attention to Social Comparison Information (ATSCI)

Public self-consciousness has been shown to be strongly associated with ATSCI, therefore, individuals with high levels of self-awareness in public situations tend also to experience high levels of social anxiety (Bearden and Rose, 1990). When an individual is concerned with the public and collective self, the allocentric or group cognitions are salient, particularly with regard to the social anxiety and the awareness of reactions from important reference groups (Triandis, 1989). Allocentrism would influence decisions in women's clothing behaviors. When an individual is more concerned with the private self, idiocentric cognition becomes salient (Triandis, 1989), and the individual is largely not aware with the reactions of others, with social anxiety likely be lowered, and with low influence on clothing choice.

Conformity Motivation

Unsurprisingly, a tendency to conform to others has been found to influence a consumer's actual conformity consumption (Lascu and Zinkhan, 1999). When a consumer conforms to one source on one issue, it is likely that she tends to conform to others on other issues as well, especially when the sources are perceived to be similar. Behavioral intentions, in terms of clothing conformity, are frequently motivated by normative interpersonal influence (Bearden, Netemeyer and Teel, 1989) with the result that consumers are directed in their product choices by referent others with the desire of attaining group acceptance (Hong and Zinkhan, 1995). In other words, individual are more likely to adopt similar styles or buy the same brands as the referent others (Kahle, 1995b).

According to Kahle's (1995b) study, conformity motivation relates to a consumer's concern with adhering to group norms in the purchase decision of a product/brand. Individuals who are low in conformity motivation are identified as role-relaxed consumers who value self-respect and equality. Therefore, conformity motivation is at the opposite end of the continuum to role-relaxed consumption. In other words, both conformity-motivated and role-relaxed consumers are aware of social reactions, but behave in an opposite manner.

HYPOTHESES

Independent self-construal involves an emphasis on differentness and uniqueness relative to others; hence, individuals with an independent self enhances their self-image in order to express their self more clearly (Abe et al., 1996; Singelis et al., 1999) and reaffirm differences in relation to others, which, in turn, may give rise to public self-consciousness (Abe et al., 1996; Markus and Kitayama, 1991). Public self-consciousness is positively associated with ATSCI (Bearden et al., 1989). When individuals are concerned with the public self, they become more aware of reactions from referent others (Triandis, 1989). Thus, individuals with an independent self which enhances their self-image are less likely to be aware of reactions from others, in large part because of their high ATSCI scores.

As interdependent self-construal emphasizes relationships with a group and prioritizes group goals, individuals high in interdependent self-construal will adjust their own behaviors as necessary, depending upon the expectations of referent others (Abe et al., 1996; Markus and Kitayama, 1991; Singelis et al., 1999). Interdependent individuals will be more likely to look for situational cues and adjust their behaviors to be in accord with others (Markus and Kitayama, 1991); therefore, they exhibit high levels of ATSCI. Women demonstrate a high degree of connectedness and dependency when their main focus is on social goals (Wang, Bristol, Mowen and Chakraborty, 2000); that is whether they are independent or interdependent, women tend to be high in social anxiety . Thus,

H1:   Independent self-construal has a positive relationship with ATSCI.

H2:   Interdependent self-construal also has a positive relationship with ATSCI.

Individuals with strong independent selves emphasize differences and uniqueness in relation to others (Abe et al., 1996; Singelis et al., 1999), and are less likely to conform to social norms. For individuals with interdependent self emphasize relationships with others , it is more likely that they would conform to social norms in order to promote harmony within the group (Adarves-Yorno, Postmes and Haslam, 2006; Markus and Kitayama, 1991; Singelis et al., 1999). Thus,

H3:   Independent self-construal has a negative relationship with conformity motivation in professional women's dressing styles.

H4:   Interdependent self-construal has a positive relationship with conformity motivation in professional women's dressing styles.

Individuals who are more sensitive to social situations tend to use clothing to enhance their self-presentation so as to attain social approval and are more concerned with the public and collective aspects of the self. ATSCI is a useful and robust measure to measure conformity (Bearden and Rose, 1990). High ATSCI individuals are highly to conform to their social groups expectations. Thus,

H5:   ATSCI has a positive relationship with conformity motivation in professional women's dressing styles.

Individuals with an independent self are likely to seek to establish their autonomy by expressing their uniqueness (Wiekens and Stapel, 2008), whereas individuals with an interdependent self are likely to seek affiliation by conforming to group norms (Abe et al., 1996; Cross et al., 2000; Singelis, 1994).   When possessions are used for establishing affiliations and/or autonomy seeking, the underlying purpose is for identity management(Cskikszentmihalyi and Rochberg-Halton, 1981). Variety-seeking behaviors are a reflection of impression management (Ratner and Kahn, 2002); so it is likely that both women's independent and interdependent selves will seek variety in attire. Thus,

H6:   Independent self-construal has a positive relationship with professional women's variety in dressing styles.

H7:   Interdependent self-construal has a positive relationship with professional women's variety in dressing styles.

Self-monitoring refers to an ability to observe and adjust behaviors for various social situations, indicating the use of impression management techniques (Snyder, 1974). Self-monitoring moderates the effect of impression management on variety-seeking behaviors (Ratner and Kahn, 2002). The ATSCI construct, developed from the self-monitoring concept, measures the individual's sensitivity to social cues and reactions of others to one's own behaviors (Abe et al., 1996; Bearden et al., 1989; Lennox and Wolfe, 1984) . Thus, ATSCI should reflect a woman's tendency toward variety-seeking which, in turn, gives rise to impression management. Thus,

H8: ATSCI has a positive relationship with professional women's variety in dressing styles

Women seeking affiliation by conforming and dressing according to group norms are clearly managing their identity (Wallendorf and Arnould, 1988). By engaging in image management, individuals tend to seek variety in dress and clothing choices related to situational specifics (Ratner and Kahn, 2002). However, an individual will reduce variety-seeking behavior when social cues indicate appropriateness of maintaining particular choices (Ratner and Kahn, 2002). A high degree of motivation toward conformity consumption is therefore likely to limit individual choices and to reduce variety in dressing styles. Thus,

H9: Conformity motivation consumption has a negative relationship with professional women's variety in dressing styles.

Figure 1 illustrated the proposed relationship of the hypotheses.

Figure 1: Hypothesized Relationship
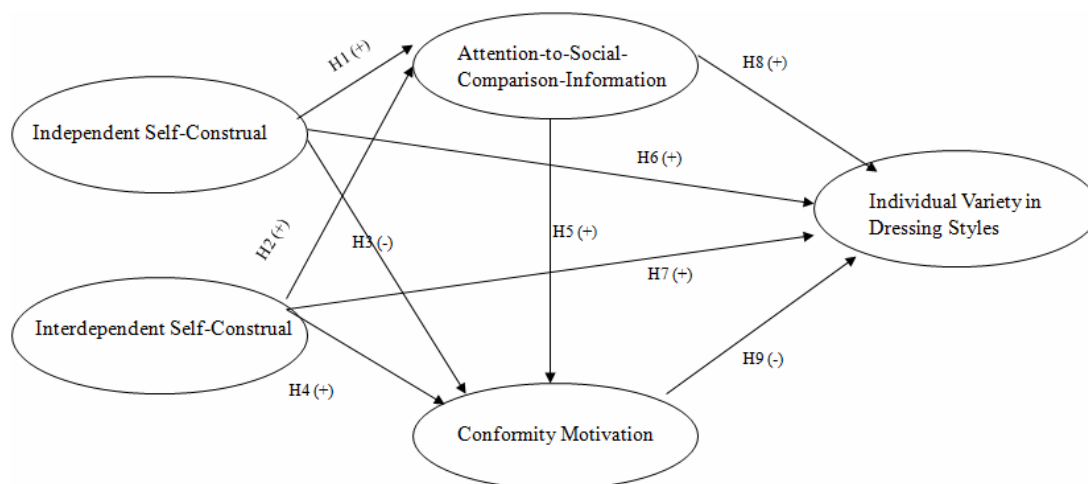
RESEARCH METHODOLOGY

The original questionnaire was pretested among 26 professional women in London and New York City, the two cities chosen for the study. These two cities which represent a population of 4 million women over 20 years of age are the two major English-speaking concentrations of fashion orientation and are the homes of most English-language fashion magazine publication. The results of the survey are not intended to be generalized beyond these two cities.

Some modifications were made after the pretest had been conducted in order to improve the clarity and comprehension of the final document (Baumgartner and Steenkamp, 2001). A pretest of the data collection method was also conducted. The authors found that a traditional pen-and-paper mail survey was not appropriate, whereas interestingly a web-based survey with monetary incentives yielded a higher response rate.

The online questionnaire with a chance to win a $500 lucky draw prize was posted on http://newyork.craigslist.org/ and http://london.craigslist.co.uk/ websites, which are known to most New Yorkers and Londoners as a free local classified listings site and a forum for informational resources. Due to the nature of web-based survey, the actual number of questionnaires circulated was unknown. However, we achieved a usable sample of 207. This study classified professional women into three groups: business-related professions (e.g. bankers, financiers, accountants and businesswomen in related fields); certified professions (e.g. lawyers, doctors, professors, teachers and government officers) and media-related professions (e.g. those that work in the fashion/entertainment industry, including creative designers, marketers and public relations). Any respondents who did not work in related professions were excluded.

The authors did not control for respondents' income within and between the three professional women's groups because fashion orientation and purchase behavior was not considered to be a signification moderating factor even if this information could have been reliably obtained. We had learned from the pretest that respondents were often unwilling to divulge this data. Furthermore, and more importantly, fashion attitude and behavior as represented in this study is not a function of price paid for fashionable female apparel. For example, a fashion conscious teacher could buy a recognizable designer brand 'little black dress' at a Target chain store while a successful lawyer may choose to buy a very similar item with more exclusive branding at a Fifth Avenue boutique at perhaps five times the price. To extend this example, it is the interest or otherwise in the 'little black dress', and its fashion statement that is the essence of this study, rather than the price paid for it.

Scales and Measurement

Professional women's variety in dressing styles

The study conducted by Ratner and Kahn (2002) analyzing variety-seeking behavior for private and public consumption demonstrated that a higher level of variety-seeking was found in public consumption versus private consumption and, among individuals with a high level of self-monitoring, reflected a high degree of impression management. This construct is indicated by the degree of an individual's actual behaviors in varying clothing options for different situations. The measurement consisted of three questions on a six-point Likert-scale ranging from *totally different* to the *same*. The questions measured the degree to which actual differences exist in the clothes women choose to wear in specific situations specifically between work and party, party and leisure, and leisure and work. Following Pessemier (1981)'s computation, variety can be derived from the summation of the discrepancies between dressing choice in each of the two specific situations as illustrated below.

$$v = |w \text{ vs. } p| + |p \text{ vs. } l| + |l \text{ vs. } w|$$
$$variety = v, \ w = work, \ p = party, \ l = leisure$$

The greater the sum of the differences, the greater the variety in dressing styles an individual presents in each situation. On the other hand, the less the sum of the differences, the more similarity of clothing choices an individual adopts in each situation. The greater the variety of choices the individual seeks, the greater the tendency of the individual to use clothes for impression management purposes (Kim and Drolet, 2003).

No *a priori* weights were applied to the three dressing situations (work, party and leisure) in constructing the theoretical model because this would have represented making judgment for which we had no data. On *a posteriori* basis, the different weights for each of the dressing situations can be approximated by reference to the magnitude of the mean scores of the pair-wise comparisons.

Self-construal

Singelis et al (1999) defined self-construal as "a constellation of thoughts, feelings and actions concerning the relation of the self to others and the self as distinct from others" (p.316). Singelis's (1994) self-construal scale of 24 items consists of two dimensions which are distinct, but includes the related subscales of independent (12 items) and interdependent (12 items) self-construals. According to Singelis (1994), the self-construal scale has established both construct and predictive validity due to the Cronbach's alphas of 0.70 for the independent subscales and 0.74 for the interdependent subscales. The construct was measured on a six-point Likert-scale.

Attention to social comparison information

This paper adopted 13 items of attention to the social comparison information scale from Lennox and Wolfe (1984), who applied Snyder's (1974) self-monitoring scale. ATSCI measures the propensity for consumers' sensitivity to social anxiety about others' reactions to their social behaviors and the search for social cues indicating the reactions of others in motivating social conformity (Bearden and Rose, 1990). This scale was measured on a six-point Likert scale.

Conformity motivation

The seven-item with six-point Likert scale of conformity motivation developed by Kahle (1995a) was employed in this paper. Kahle (1995a) describes conformity motivation as the degree to which a person remains within a group norm when wearing or consuming. This paper, however, retained only four items of Kahle (1995a) because of elimination of others during the pretest.

Exploratory and Confirmatory Factor Analyses

Exploratory factor analysis (EFA) was performed separately on each construct to confirm its scale dimensionality. Items with low factor scores and cross-loadings were eliminated. The items retained for each construct were tested for Cronbach's alpha, the Kaiser-Meyer-Olkin measure of sample adequacy, and percentage of variances explained. Individual variety in dress, attention to social comparison information and conformity motivation which were hypothesized as uni-dimensional constructs, while self-construal was treated as a two-dimensional construct. Low factor scores and cross loadings on the self-construal scale, resulted in the detection of four items of the independent self-construal and two items of the interdependent self-construal scale. The final eight-item scale of independent self-construal yielded 13 per cent variance with a Cronbach's alpha of 0.63. The 10-item scale of interdependent self construal accounted for 17 per cent of variance with a Cronbach's alpha of 0.74. Following the rule of parsimony, the seven-item scale of ATSCI was employed. Three items in the ATSCI scale were later eliminated due to their unclear loadings. Hence, the remaining four items explained 59 per cent of the variance with a Cronbach's alpha of 0.76. Only one of the four items of conformity motivation was removed. The retained three items explained 63 per cent of variance which gave a Cronbach's alpha of 0.71. Finally, individual variety in dressing styles yielded a one-factor solution with 68 per cent of variance explained with a Cronbach's alpha of 0.80. The Kaiser-Meyer-Olkin measure of sampling adequacy exceeded 0.50.

It is generally not recommended that confirmatory factor analysis (CFA) be performed on constructs with three items or fewer, thus the individual variety in dressing styles and the conformity motivation constructs were excluded. Using a ten-item interdependent self-construal and an eight-item independent self-construal scale, the two-factor model showed a significant incremental fit as

demonstrated by the reduction in chi-square values, $\Delta\chi^2$ (1) = 152.831, $p < 0.01$. Other fit indices fell within acceptable ranges. The original seven-item scale for ATSCI resulted in χ^2 (5) = 18.858, $\chi^2/df = 3.773$, p < .01, AGFI = 0.888. However, it yielded a weak measurement and model fit compared to the five-item scale, χ^2 (14) = 42.788, $\chi^2/df = 3.056$, p <. 01, AGFI = 0.890 which displayed significant changes in chi-square, $\Delta\chi^2$ (9) = 23.930, p = .002. As EFA had also indicated the weakness of item two for ATSCI, the subsequent measurement model was tested. Although the results of the CFA showed that the $\Delta\chi^2$ of the model with the exclusion of three items of ATSCI was insignificant, the other fit indices were acceptable, thus resulting in a ATSCI measurement consisted of four items.

Table 1: Confirmatory Factor Analysis										
	χ^2	df	P	$\Delta\chi^2$	P	χ^2/df	GFI	AGFI	RMR	RMSEA
Self-Construal										
One-factor model with all 24 items	809.362	252	<.01	-	-	3.212	0.727	0.675	0.142	0.104
Two-factor model with all 24 items	638.913	251	<.01	170.449	<.01	2.545	0.786	0.744	0.124	0.087
One-factor model (delete 11,12,13,16,20,24)	517.270	135	<.01	-	-	3.832	0.770	0.709	0.146	0.118
Two-factor model (delete 11,12,13,16,20,24)	364.439	134	<.01	152.831	<.01	2.720	0.836	0.791	0.132	0.092
Attention to Social Comparison Information										
Model 1 – all items included	42.788	14	<.01	-	-	3.056	.945	.890	.072	.100
Model 2 – delete item 1,6	18.858	5	<.01	23.930	<.01	3.772	.963	.888	.055	.117
Model 3 – delete item, 1,2,6	4.382	2	.112	38.406	<.01	2.191	.989	.947	.039	.076

DATA ANALYSES

Partial least squares (PLS), a second generation multivariate analysis technique (Reiss and Ogden, 2007) , was used in the research analysis for casual path modeling. The PLS approach was deemed most suitable for this complex conceptual relationship framework because it allows models with limited theoretical backgrounds to be tested for empirical relationships. PLS results are divided into two parts, the assessments of the outer and inner relationships. Outer relations or measurement models are relationships between observed indicators and latent constructs. Inner relations or structural paths are relationships among different constructs.

Outer Relations – Measurement Models

PLS provides factor loading results, which are important for predictive validity of the scales. In PLS, satisfactory loadings of 0.50 and 0.60 for model development are quite acceptable. The comparison of the EFA and PLS factor loadings and average factor loadings for all items in the model is presented in Table 2. Composite reliabilities of 0.70 or above shown by the data

demonstrate the internal consistency of the measurement model. The average variance extracts (AVEs) ranged from 0.29 to 0.61, which meet minimum requirement (Chin, 1998). With acceptable levels of AVEs and average composite reliabilities, the authors concluded that construct reliability of the measurement model had been established.

Inner Model - Hypotheses Testing

PLS can evaluate theoretical hypotheses as well as indicate the existence of relationships for further testing (Chin, Marcolin and Newsted, 2003). In other words, PLS can be applied to estimating latent structural models that are indirectly observed by multiple indicators for theory testing and development as well for predictive applications (Anderson and Gerbing, 1988; Wold, 1981) . The focus of the assessments of structural paths in PLS is on the inner model and the significance of the paths can be measured by bootstrapping critical ratios, or t-statistics, which are greater than 1.96 (Chin, 1998) at $p < 0.05$ or 2.33 at $p < 0.01$, and the index of variance in endogenous variables explained by the path should be greater than 0.015. Fit indices of individual R^2 greater than 0.10 is also necessary for predictive power of the model (Fornell and Cha, 1994). As the purpose of this paper is to examine conceptual relationships among constructs, not to determine a theoretical framework, values of R^2 may be of only moderate concern in this case. The results of path coefficients, which are the variances due to path, R^2 and *t*-statistics are illustrated in Table 3.

Table 2: Comparison of EFA and PLS Factor Loadings			
	EFA	PLS	
	Loadings	Loadings	Average Factor Loadings
Individual Variety in Dressing Styles (AVE = .614, Composite Reliability = .810)			
How different are the clothes that you normally wear to work and the clothes you wear to a party?	0.800	0.821	0.801
How different are the clothes that you normally wear to work and the clothes you wear for leisure?	0.847	0.843	0.774
How different are the clothes that you normally wear for leisure and the clothes you wear to a party?	0.817	0.798	0.732
Independent Self-Construal (AVE = .294 Composite Reliability = .699)			
Speaking up during meeting is not a problem for me.	0.404	0.361	0.326
Having a lively imagination is important to me.	0.584	0.492	0.518
I am the same person at home that I am at work.	0.412	0.431	0.446

Table 2: Comparison of EFA and PLS Factor Loadings			
	EFA	PLS	
	Loadings	Loadings	Average Factor Loadings
Being able to take care of myself is a primary concern for me.	0.464	0.385	0.371
I act the same way no matter who I am with.	0.372	0.482	0.492
I prefer to be direct and forthright when dealing with people I've just met.	0.529	0.676	0.601
I enjoy being unique and different from others in many respects.	0.660	0.651	0.661
My personal identity, independent of others, is very important to me.	0.708	0.682	0.579
Interdependent Self-Construal (AVE = .323 Composite Reliability = .803)			
I have respect for the authority figures with whom I interact.	0.405	0.397	0.381
It is important for me to maintain harmony within my peer group.	0.632	0.565	0.568
My happiness depends on the happiness of those around me.	0.559	0.559	0.537
I would offer my seat on a bus to my boss.	0.468	0.426	0.467
I respect people who are modest about themselves.	0.570	0.546	0.557
I will sacrifice my self interest for the benefit of my peer group.	0.665	0.633	0.658
I often have the feeling that my relationships with others are more important than my own accomplishments.	0.516	0.567	0.577
I take into consideration my family's advice when making career plans.	0.486	0.572	0.486
It is important to me to respect decisions made by the group.	0.547	0.555	0.574
I will stay in a group if they need me, even when I'm not happy with the group.	0.618	0.672	0.566
Attention to Social Comparison Information (AVE = .524 Composite Reliability = .812)			
The slightest look of disapproval in the eyes of a person with whom I am interested in is enough to make me change my approach.	0.823	0.791	0.737
It is important to me to fit into the group I am with.	0.768	0.802	0.728
My behavior often depends on how I feel others wish me to behave.	0.802	0.772	0.720
When I am uncertain how to dress in a social situation, I look to the behavior of others for clues.	0.655	0.683	0.694
Conformity Motivation (AVE = .584, Composite Reliability = .804)			
My friends and I tend to buy the same brands.	0.778	0.816	0.794
I buy brands that will make me look good in front of my friends.	0.826	0.835	0.738
When I buy the same things my friends buy, I feel closer to them.	0.772	0.759	0.742

Table 3: Hypotheses Testing							
Predicted Variables	Predictor Variables	Hypothesis	Path Weight	Variance due to Path	R^2	Critical Ratio	
Attention to Social Comparison Information	Independent Self-Construal	H1+	-0.329	0.090		3.657	Not Supported
	Interdependent Self-Construal	H2+	0.345	0.090	0.270	3.856	Supported
Conformity Motivation	Independent Self-Construal	H3-	-0.177	0.067		2.627	Supported
	Interdependent Self-Construal	H4+	0.016	0.075		0.213	Not Supported
Individual Variety in Dressing Styles	Independent Self-Construal	H6+	-0.069	0.108		0.636	Not Supported
	Interdependent Self-Construal	H7+	0.006	0.096		0.063	Not Supported
	Attention to Social Comparison Information	H8+	0.163	0.088		1.846	Not Supported
	Conformity Motivation	H9-	-0.379	0.076	0.163	4.973	Supported

FINDINGS

Although the authors hypothesized a positive relationship between independent self-construal and ATSCI in H1, the analysis revealed the opposite direction applied in this study ($\beta = -0.329$, t = 3.657). This finding is inconsistent with Aaker (1999) and Abe et al. (1996) which suggested that women can be significantly influenced by situational cues due to a perceived threat of embarrassment or related social fears with respect to an overall sense of self. Independent aspects of the self include the ability to withstand social pressures. Hence a high level of independent self tends to give rise to a lower level of social anxiety (Markus and Kitayama, 1991). Therefore, H1 was not supported by the data. Interdependent self-construal was found to have a positive relationship with ATSCI ($\beta = 0.345$, $t = 3.856$). Our finding is consistent with Markus and Kitayama (1991), Abe et al. (1996), and Singelis et al. (1999) which found that interdependent individuals will look for situational cues and adjust their fashion clothing behaviors to be in accord with those of others. Thus, H2 was supported.

A negative significant relationship between independent self-construal and conformity motivation ($\beta = -0.177$, $t = 2.627$) was demonstrated. This finding revealed that an independent- (Abe et al., 1996; Singelis et al., 1999), which is in the direction opposite to social conformity. Hence, H3 was supported. Interdependent self-construal, on the other hand, has no relationship with conformity motivation ($\beta = 0.016$, *ns*). An interdependent woman is expected to conform to social

norms in order to promote harmony within a group (Markus and Kitayama, 1991; Singelis et al., 1999), but our findings again showed an opposite result. This may be explained by the concepts of in-group and out-group in the sense that interdependent women tend to conform to particular in-groups, but not to out-groups (Iyengar and Lepper, 1999; Triandis, 1995). Therefore, H4 was not supported. Attention to social comparison information has a significant positive relationship with conformity motivation (β = 0.271, t = 3.654. Therefore, H5 was supported. Social anxiety and situational cues are strong indicators of women's tendency toward conformity (Abe et al., 1996; Bearden et al., 1989; Bearden and Rose, 1990; Lennox and Wolfe, 1984;).

Both independent and interdependent self-construal, as well as attention-to-social-comparison-information had no relationship with individual variety in dressing styles. Therefore, H6, H7 and H8 were not supported by the data. Women with high interdependent self-construal tend to seek affiliation by conforming to group norms (Abe et al., 1996; Cross et al., 2000; Singelis 1994), which is related to variations in significant others and specific situations (Klepp and Storm-Mathisen, 2005). Thus for interdependent women, individual variety in dressing styles is likely to be a formation of in-groups and situation specifics. As attention-to-social-comparison-information was a part of the self-monitoring scale (Lennox and Wolfe, 1984), women with high self-monitoring demonstrated a tendency toward identity management (Snyder, 1974) and, therefore, were inclined to be high in variety-seeking with respect of fashion clothing (Ratner and Kahn, 2002). A significant negative relationship was found between conformity motivation and individual variety in dressing styles (β = -0.379, t = 4.973). Variety in behaviors is dependent upon different needs and situations related to the desire for group affiliation (McAlister and Pessemier, 1982), therefore, motivation to conform to group norms reduces women's choices of clothing, demonstrating less variety in fashion dressing. Thus, H9 was supported.

Figure 2 below summarizes the results of hypothesized relationship.

Figure 2: Graphical Results of Hypothesis Testing
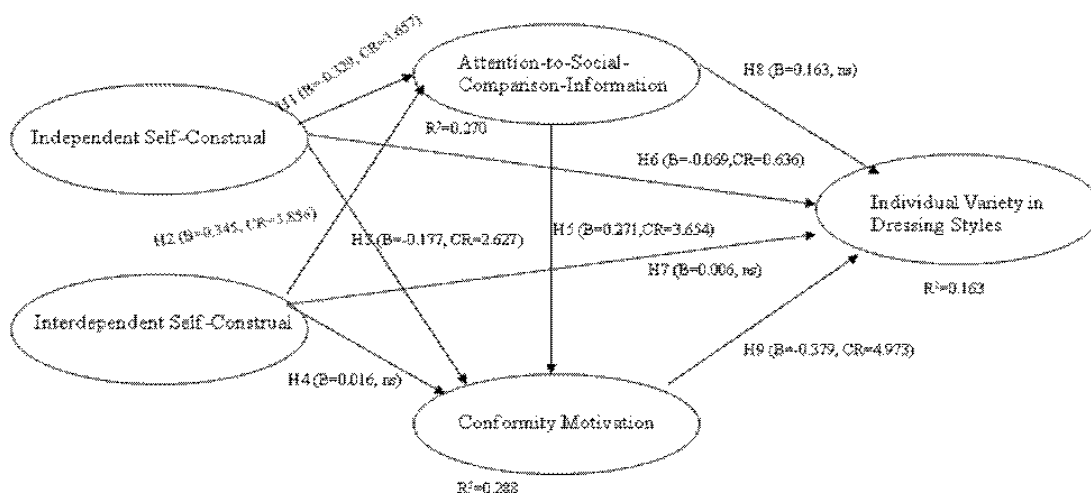
DISCUSSION OF FINDINGS

Our study reaffirms the relationships found between self-construals and ATSCI (Markus and Kitayama, 1991) that high independent self-construal corresponds to being low in social anxiety and that high interdependent self-construal relates to high social anxiety. When possessions, such as fashion clothing, are used to achieve autonomy and/or for affiliation seeking purposes, the underlying goal is to foster identity development (Wallendorf and Arnould, 1988). No direct relationship was found between interdependent self-construal and conformity motivation. This finding is inconsistent with some earlier studies by Markus and Kitayama (1991), Abe et al. (1996), Bagozzi and Lee, 2002 and Singelis et al. (1999). One possible explanation for this discrepancy may be that interdependent individuals tend to conform to particular in-groups, but not to out-groups (Iyengar and Lepper, 1999; Triandis, 1995).

McCracken and Roth (1989) stated that women who are highly motivated to fit in with a particular group are also likely to be strongly aware of fashion cues. In other words, attention to social comparison information, which relates to social anxiety, has been used in previous consumer behavior studies with a focus on social surroundings that trigger comparisons and engender conformity motivation to impress others (Bearden and Rose, 1990). This conformity is motivated by normative influences which can be said to be a manifestation of compliance or the identification form of conformity (see Park and Lessig, 1977). Thus importantly, this paper, for the first time, extends the focus of the relationship between ATSCI and conformity motivation beyond previous published research. This finding contributes to the increasing predictive validity of ATSCI.

This paper demonstrates that when consumers learn the appropriate choices of conduct from social cues, variety-seeking behavior tends to be reduced (Ratner and Kahn, 2002). In other words, the motivation to conform to others reduces women's efforts in choices regarding clothing adopted for different occasions, thereby often reflecting a low degree of actual variety in dressing styles. The motives for professional women varying fashion clothing worn for different occasions are also uncertainty avoidance but, in addition, a motive is also not to conform to others. Nonconformity consumers are driven by independence motivation and tend to display uniqueness relative to others (Tepper et al., 2001). Our paper contributes to an understanding of variety-seeking in fashion clothing with regard to identity management as Western career women with independence motivation tend to display variety in dressing styles for purposes of autonomy- seeking.

CONCLUSION

Society is interdependent, wherein each individual influences and is influenced by others. The members of each social group play parts in introducing new styles to and influencing other members, entering into the process of evaluating meanings and appropriateness, and then mutually adopting new styles(Miller et al., 1993). Once these new styles are adopted by other groups, for

example, people from different social classes, the social significance of such styles to the earlier adoptive group may change (Thompson and Haytko, 1997). The new meanings attributed to such styles may be inconsistent with the self, thus women subsequently re-enter the fashion adoption evaluation process (Miller et al., 1993). Group members continuously engage in the fashion adoption process cycle in order to maintain and enhance their self-images (Au et al., 2000). The integration of women into, and their interactions with, the fashion adoption process is a market phenomenon useful to marketers in identifying patterns of individual and social influences on fashion clothing.

The symbolic meanings attached to fashion clothing change over time; thus, is important for marketers to continually monitor changes in perceptions of consumers' self-images in order to develop and implement relevant marketing strategies targeting particular social groups for given time periods and situations (Phau and Lo, 2004). Women use fashion clothing to identify themselves with some groups of women while distinguishing themselves from others, negotiate their public images to manage appearance and balance their sense of affiliation and autonomy (Banister and Hogg, 2004).

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INVESTIGATING THE PRESENCE OF TRANSFER PRICING AND ITS IMPACT IN U.S. AIRLINE MERGERS

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ABSTRACT

Transfer pricing (TP) issues are typically highly proprietary due to the potential value addition or leakage they may present for an organization. This paper attempts to examine the issue of TP within the scope of U.S. airline mergers, specifically the paper examines the most recent U.S. airline merger between Delta Air Lines, Inc. and the former Northwest Airlines Corporation (now a wholly owned subsidiary of Delta Air Lines, Inc.), and attempts to identify the potential TP issues that may have arisen between the two air carriers, a particularly challenging task due to the domestic nature of current airline mergers. Further analysis provides a look into the future of airline industry mergers, issues that may arise within the scope of TP, and how U.S. airlines should proceed if international mergers become a possibility under the Open Skies treaty. Additionally, it should be noted that airline mergers would be primarily suspect for TP violations when the merged companies continue to operate as two separate organizations under a single ownership. In such cases, TP should be considered to better manage transition risks.

INTRODUCTION

For those that remember travel in the early days of the airline industry as "romantic", the recent cost cutting methods within the industry are unwelcome. From cutting free soft drinks on flights to charging for checked baggage, and seat selection, U.S. airlines are pulling out all of the stops to remain solvent in an increasingly difficult industry. On April 15, 2008, two of the country's largest carriers took further measures to remain solvent when they announced that they intended to merge in a $3.1 billion deal (Isidore, 2008). On October 29, 2008, the carriers received official approval from the Department of Justice to restructure their two business models into the world's largest airline in an attempt to cut inefficiencies and boost profitability (Corridore, 2008). Thus began what many see as the new era of the "mega airline."

Many factors have driven the new culture of mergers within the industry; rising fuel costs, a labor-relations culture that originated from government regulation of U.S. airlines, a reactive instead of proactive strategic management business model, a high risk of substitute products

[particularly from the low cost sector, which in turn forced a downward trend in fares], and in Europe, a full liberalisation of airlines within E.U. borders.

Mergers in and of themselves, are highly complex issues that also relate to multifaceted questions related to transfer pricing (TP) practices. TP in the context of a merger would refer to the practice of internally pricing the goods, services, or brand that will be moving from one affiliate to another. TP is one highly proprietary issue that should not be overlooked in the merger dynamic. It should also be noted that TP is a strategic cost-cutting cool with the ability to appease tax liabilities, or (if used incorrectly) the ability to cost an organization a significant amount of money through tax penalties and higher tax liabilities. Will there be any foreseeable issues in TP planning with regards to airline mergers? If so, which TP method is appropriate? What are the implications if the organization fails to select the correct method? How does the issue of TP play into the strategic plans of the organization and its culture?

This paper attempts to examine the issue of TP within the scope of U.S. airline mergers. Specifically, the paper examines the most recent U.S. airline merger between Delta Air Lines, Inc. and the former Northwest Airlines Corporation (now a wholly owned subsidiary of Delta Air Lines, Inc.) and attempts to identify the potential TP issues that may have arisen between the two air carriers, a particularly challenging task due to the domestic nature of current airline mergers. Further analysis provides a look into the future of airline industry mergers, issues that may arise within the scope of TP, and how U.S. airlines should proceed if international mergers become a possibility under the Open Skies treaty. Additionally, it should be noted that airline mergers would be primarily suspect for TP violations when the merged companies continue to operate as two separate organizations under a single ownership.

DELTA AIR LINES, INC. AND NORTHWEST AIRLINES CORPORATION

Following the attack of the September 11, 2001 on the World Trade Center and Pentagon, there was an almost instant shift in the nature of the airline industry. What had once been a cyclical industry, now found itself in a downward slide not seen since the deregulation of the industry in the 1970's. But, even as airlines attempted to adjust to business life post 9/11, a new type of 9/11 came along—fuel costs. Jelveh (2008) notes "through the 1990's, with oil prices at $20 per barrel, fuel expenses made up between 10 and 20 percent of airlines' operating costs. As of the first quarter [of 2008], with oil prices at over $100 per barrel, most airlines reported fuel costs of between 30 and 40 percent of total expenses…" (p. 1)

After years of struggling to stay solvent in a changing market, a new wave came over the industry—bankruptcy. On September 15, 2005 Delta Air Lines, the nation's third largest airline, filed Chapter 11 bankruptcy in U.S. bankruptcy court (Isidore, 2005a; Unknown, n.d.:a; Unknown, 2005a). The nation's fourth largest carrier, Northwest Airlines followed just minutes later (Isidore,

2005b; Unknown, 2005a). For Delta, the filing followed a string of unprofitable quarters dating back to 2000 (Isidore, 2005a).

In late April and May of 2007, Delta Air Lines and Northwest Airlines (respectively) emerged from bankruptcy protection, restructured and ready to tackle the new market. It is reported that Delta, alone, had nearly halved its debt from its entrance into bankruptcy in 2005 to its emergence from bankruptcy in 2007 (Unknown, 2007b; Unknown, 2007c).

However, in 2008, as the economy softened and fuel prices continued their dramatic rise, it became apparent to many in the airline industry that mergers may be the key to a solvent airline industry (Sorkin & Bailey, 2008). In the first two months of 2008, the Air Transport Association noted that average fares were up 6% from the same time frame in 2007 (Isidore, 2008). However, the U.S. Energy Department noted that average jet fuel prices were up 55% over the same period, leaving the airlines no choice but to look at alternative strategic planning options (Isidore, 2008). Thus, the merger talks and speculation grew rampant, with Northwest and Delta at the forefront of the discussions.

On April 15, 2008, Delta Air Lines finally announced the long anticipated deal to acquire Northwest Airlines for roughly $3.1 Billion, under which the airlines would merger operations, equipment, personnel, and branding under the Delta name (Isidore, 2008). On October 29, 2008, the justice department approved the deal, and thus began the process of merging the two airline giants (Corridore, 2008).

Transfer Pricing and Mergers

While the newly consolidated Delta Air Lines, Inc. continued to make headlines regarding its merger, airlines were certainly not the only industry being pushed towards mergers in the current economic climate. According to an article published on *Business Week Online*, the newspaper industry, the candy industry, the alcohol industry, the retail industry, and even the technology industry were all making significant steps towards mergers (Farrell, 2008). As such, the links between mergers and TP are moving into the forefront of tax authorities' minds and policies, and should be in the forefront of CEO and CFO minds, as well.

The importance of TP is a topic that's growing in significance in business strategic planning. Section 408 of I.R.S. code defines an appropriately set TP as "prices charged by one affiliate to another, in an intercompany transaction involving the transfer of goods, services, or intangibles, [that] yield results that are consistent with the results that would have been realized if uncontrolled taxpayers had engaged in the same transaction under the same circumstances (referred to as the Basic Arm's Length Standard (or BALS))," (Unknown, 2007d; p. 1). It is typically assumed that corporations are going to make TP decisions based upon their financial benefit (i.e., minimizing tax liability). As such, TP decisions have the potential to add a significant amount of value to a firm.

The idea that TP can add value to a firm is widely touted in academic literature. Anderson, Cheng, Rao, & Zhou (2006) note, "An effective transfer pricing scheme can mitigate transfer pricing exposure, ensure compliance with the local tax regulations, as well as reduce daily operating costs. Therefore, transfer pricing management should be a part of strategic planning as opposed to a post-event remedy." (p. 11) Bateman, et. al. (1997) further suggest, "The transfer pricing methodology chosen greatly affects an [organization's] perceived value and long term viability." (p. 23) These authors suggest that TP is an issue that should not be overlooked by managers.

However, in addition to adding value to a firm, TP can also represent a value leakage if improperly handled. Robertson-Kellie & Mahalingham (2006) notes four potential areas of value leakage for firms who are inefficiently handling TP in strategic planning:

1. A significant leakage of resources (both in management time and money) when TP audits arise,
2. Double taxation may be an additional issue for firms if TP issues arise in a multinational firm,
3. The failure to include TP in continual process reviews, and
4. Firms may miss opportunities to minimize global tax rates.

As the article illustrates, inefficient handling of TP can result in a significant value leakage to an organization.

Mergers present an even more challenging position for firms in handling potential TP issues. Alms, Rutges, Soh & Uceda (2008) note, "[Merger and acquisition] deals are alive with [TP] implications, not only in the bringing together of potentially inconsistent [TP] systems, but also in the integration objectives and financing needs of the acquirers." (p. 26) They further continue that "…we often recommend that deal related risk management should begin before the deal is completed." (p. 27) So, what can an organization like Delta Air Lines do to minimize TP risks in its acquisition of Northwest Airlines?

1. "Develop a sufficiently accurate understanding of the target company's [TP] structure to make key decisions…" (Alms, Rutges, Soh, & Uceda, 2008, p. 30).
2. "Decide what changes to make [in the company's TP process] and the [TP] risk management approach needed to manage the transition risks," (Alms, Rutges, Soh, & Uceda, 2008, p. 30).

The suggestions may seem broad, but they are the foundation for assessing the complex TP issues that may arise in a merger. As noted above, these issues should have been sufficiently addressed prior to Delta Air Lines acquiring Northwest Airlines on October 29, 2008, with the former being

completed in the due diligence phase Alms, Rutges, Soh, & Uceda, 2008).

Whether or not these steps have been taken by Delta Air Lines may be a key indicator of the future success of the merger. It is with these ideas in mind that this paper sought to uncover TP miscues within the scope of the Northwest Airlines Corporation and Delta Air Lines, Inc. merger. Methodology for identifying these miscues will be discussed in further detail in the subsequent section.

METHODOLOGY

When assessing the potential foresight of TP problems in the Delta Air Lines, Inc. and Northwest Airlines Corporation merger, potential linkages in the individual value chains of the respective air carriers were sought. By identifying these potential linkages and their ownership, it may be possible to identify areas in which tax authorities may find a misrepresentation of the BALS.

Secondary research was utilized to identify issues. The first source of secondary research was several tax and airline related journals (i.e., CPA Journal, International Tax Review, International Journal of Commerce and Management, Internal Auditor, International Tax Journal). Terms such as 'transfer pricing', 'transfer price', 'intra-organization price', 'intra-company price', 'inter-organization transfer', and 'internal price' were utilized to identify potential existing research on the topic of airline mergers and transfer pricing. Upon inspection it became clear that existing research did not exist within the scope of this paper. Potential additional sources were identified in the separate areas of transfer pricing, transfer pricing in mergers, airlines, and airline mergers. Additionally, the Internal Revenue Service (I.R.S.) website was accessed to ascertain U.S. transfer pricing regulations, directives, and bulletins.

The next source of secondary research was the website of the U.S. Federal Trade Commission (FTC) (Unknown, 2009b). The FTC enforces TP laws through settlements called actions. Again, terms such as 'transfer pricing', 'transfer price', 'intra-organization price', 'intra-company price', 'inter-organization transfer', and 'internal price' were utilized to identify potential TP actions taken against airlines. It, once more, became apparent that no actions have been taken by the FTC against airlines regarding TP.

After probing existing airline TP articles and FTC actions, potential common holdings between Northwest Airlines and Delta Air Lines were examined to search for potential value chain TP issues between affiliates under the same corporate banner. FindLaw.com provided full bankruptcy filings for both Northwest Airlines Corporation and Delta Air Lines, Inc. Delta Air Lines, Inc.'s bankruptcy filing included a corporate ownership statement, wherein it identified organizations in which Delta Air Lines owned an interest. The companies identified in the corporate ownership statement included Aero Assurance, Ltd., U.S. Cargo Sales Joint Venture, LLC, ARINC Incorporated, Cordiem LLC, Cordiem Inc., DATE, and the Atlanta Airport Terminal Corporation.

Northwest Airlines Corporation did not include a corporate ownership statement. However, secondary research was completed on each of the organizations identified in Delta Air Lines' corporate ownership statement to attempt to identify common Northwest Airlines holdings. After seeking and finding ownership information on each of the companies listed in the Delta Air Lines corporate ownership statement, it was established that there were no common holdings between Delta Air Lines, Inc. and Northwest Airlines Corporation.

An additional search for holdings was launched through the use of the financial statements and the Securities and Exchange Commission (SEC) filings of both airlines, accessed through the company website (Delta) and Hoovers.com (Northwest). Financial statements and SEC filings revealed no common holdings between Northwest Airlines Corporation and Delta Air Lines, Inc. Additionally, potential TP issues were sought between the pre-merger parent airlines and subsidiaries (regional airlines). Research was completed to locate such TP issues through financial documents, as well as additional review of bankruptcy filings of the parent airlines. No TP issues were identified between the parent airlines and subsidiaries.

RESULTS

After reviewing FTC actions, academic literature, bankruptcy filings, SEC filings, and financial statements from the two air carriers, no common supplier holdings were identified between the airlines. Within the scope of this paper, this prevented any uncovering of violations of TP practices by Delta Air Lines, Inc. under its acquisition of Northwest Airlines Corporation.

Looking Forward: Airlines and Transfer Pricing

While no TP violations were identified between Northwest Airlines Corporation and Delta Air Lines, Inc., the airline industry is certainly not exempt from TP issues. As the industry is reshaped over the coming years, TP will not fall into the backburner of the minds of tax authorities, but rather, move front and center.

For the past 60 years, airlines have been governed by bilateral service agreements (Unknown, 2007a). "These agreements contain [legal] restrictions on the number of airlines and frequency of service on many international routes, while many countries have limits on airline ownership and control by foreign nationals," (Unknown, 2007a, p. 1). As an example, while the European Union (E.U.) restricts non-E.U. ownership in E.U. airlines to 49%, U.S. laws restrict non-U.S. ownership of U.S. airlines to 25% (Michaels, 2008). These restrictions amount to an airline industry that is fairly sheltered from international competition and unable to seek investment from non-domestic sources, which will likely affect the long-term viability of the industry.

However, post-9/11 and during the recent increase in fuel prices, there has been an increase in the push for liberalisation of the airline industry, specifically from Europe towards the U.S

(Michaels, 2008). According to the International Air Transport Association (IATA), liberalisation has benefits for consumers and producers (airlines) alike, including lower prices, increased productivity, a higher level of choices, and increased profitability (Unknown, 2007a). However, one of the biggest changes that full liberalisation would bring is that, in this growing culture of mergers, airlines would be allowed to merge across international borders, provided they meet antitrust regulations.

Until now, in light of ownership laws and strict anti-trust enforcement from both sides of the Atlantic, airlines entered into alliances. These alliances allowed airlines to reap some of the benefits of a merger without presenting anti-trust issues. R. Hewitt Pate, Deputy Assistant Attorney General for the U.S. Antitrust division, in a statement before the Senate Subcomittee on Antitrust, Competition, and Business Rights called alliances (2001), "...somewhere between an outright merger and a traditional arm's-length (BALS) interline agreement." (p. 3) However, if the U.S. loosens its ownership restrictions in 2010, as it is required to do by the "Open Skies" treaty, there could be a significant wave of changes in the industry (Unknown, 2009a). The loosening of the restrictions and the so-called "failing firm doctrine" -- the idea that antitrust authorities let some deals pass that would otherwise be blocked if there is a high risk that one of the firms could fail--would likely result in other countries following suit, which could present a wave of international airline mergers (Farrell, 2008) and have significant TP implications.

Choosing a Method

If airlines are allowed to merge across international borders, there may be a significant change in TP issues for airlines. Instead of simply managing an airline's own value-chain and related TP relationships; the airlines will be forced to deal with multiple tax authorities, jurisdictions, and TP regulations. This can present a complex scenario for airlines who presumably want to prevent value leakage and ensure an optimal addition of value to their individual firms.

The first portion of most international regulations requires that the price paid for the transferred good or service be at a BALS. This means that "[The price] can be the price that would have been paid if the parties had no special relationship," (Frank, 2008, p. 1). However, the most challenging portion of TP is actually achieving a BALS through a method that is satisfactory for tax authorities. The Institute of Management and Administration recently published an article entitled "5 Methods That Help Pros Walk the TP Tightrope" where the following methods for achieving BALS are identified (Frank 2008):

1. [a profit-based method] The comparable products method (CPM) is achieved by "…focus[ing] on the operating profit of the tested party as opposed to the gross margin of the transaction, eliminating the need to determine whether operating costs are comparable," (Frank, 2008, p. 2).

The advantage of this method is that the data is easy to find, and the method is easy to apply (Frank, 2008).

2. [a profit-based method] The residual profit split method (RPSM) is another profit-based method that is used most often when both ends of the transaction own "valuable nonroutine intangibles," (Frank, 2008; Unknown, 2009c). This method determines a "residual profit split," (Frank, 2008, p. 2).

3. [a transactional method] The comparable uncontrolled price (CUP) method. "[CUP] determines price based on a price charged for the same or a very similar good in a transaction between parties without a special relationship [uncontrolled parties]," (Frank, 2008, p. 2). The risk here, however, is [that airlines must find a transaction that represents a "very high degree of comparability…between the goods, the volume and conditions of the sale, warranties, and so on," (p. 2) which would seem especially difficult in an industry that would be new to international mergers (Frank, 2008). However, if such a transaction can be located, this method is considered the most reliable of all of the methods (Frank, 2008).

4. [a transactional method] The resale price method focuses on the gross profit margin of the airline that is being acquired and operated under a parent airline, and can only be used when the airline does not add a substantial level of non-routine value, which would, again, be difficult to establish in the airline industry (Frank, 2008).

5. [a transactional method] The cost plus method of calculating arm's length, "although similar to resale price, here the focus is not on the good but on the typical gross margin expected to be earned by the ultimate seller." (p. 20) This method would typically be used when a U.S. airline were being acquired and operated by a foreign airline, and asks "what is the profit margin of the [foreign airline], and is it comparable to that of others?" (Frank, 2008, p. 2).

It's highly important to note that different countries' tax authorities may prefer different methods which achieve an approved BALS price (the U.S. gives preference to the transactional methods), so airlines should be particularly aware of the individual jurisdictions they will be working with (Hayuka, 2008). Additionally, the penalties for failing to meet BALS are steep; for example, in the U.S., IRC Section 6662 states that "A penalty may be imposed that is between 20 percent and 40 percent of the understatement of tax attributable to the TP error, depending on the

size of the error," (Frank, 2008, p. 2). Airlines, when treading in the uncharted waters of international TP, need to mindful of these penalties, as well as the value leakage that inefficient TP can lead to, even if undiscovered by tax authorities. In addition, the importance of keeping thorough and proper documentation cannot be overstated. "If thorough documentation kept by the [airline] demonstrates a good-faith compliance effort, penalties may be avoided" (Frank, 2008, p. 3).

Transfer Prices, Audits, & Advanced Pricing Agreements

An increasing number of countries are creating and amending legislation in relation to TP (Robertson-Kellie & Mahalingham, 2006). As such, many currently practicing multinational organizations are experiencing an increase in TP audits by tax authorities, and audits have also increased in force (Robertson-Kellie & Mahalingham, 2006). According to a survey conducted by Ernst & Young in 2005, 63% of multinational firms have been subject to a TP audit, with 40% of those audits resulting in adjustments being made by the auditing tax authorities (Lo & Wong, 2007). Additionally, interviews have revealed that tax authorities view TP as "a top audit issue" (Ackerman, Hobster, & Landau, 2002). This illustrates an increasingly intense and complex environment for airlines entering into international mergers.

So, what draws the attention of tax authorities? According to Anderson, Cheng, Rao, & Zhou (2006), there are three key criteria for tax authorities to focus in on a TP audit target:

1. "consecutive losses",
2. "fluctuating profits", and
3. "low [profits] or losses but continuously expanding operations."

A 2008 article in *Internal Auditor* also adds corporate restructuring to that list (Clemmons, 2008). Unfortunately, due to the unique nature of the industry, many (if not all) airlines fall into one of these categories at one time or another. This indicates a need for airlines to be uniquely prepared to handle TP audits.

The key issue for airlines in protecting the organization from value leakage due to TP audits is to ensure proper documentation of TP decisions. A 2003 I.R.S. directive instructed auditors to request documentation in all audits with international transactions (Foley, 2004/2005). The directive notes that penalties will apply unless the auditor finds that the taxpaying organization had documentation at the time the return was prepared or submitted documentation to the auditor within 30 days of the auditor's request, and the documentation meets the standards of regulations (Foley, 2004/2005).

The most effective method of documentation for airlines to prevent value leakage due to TP audits is to establish an advanced pricing agreement, or APA. The APA is an agreement between the tax authority (I.R.S.) and the taxpayer (airline) in which a transfer price for a good or service is

agreed upon between the two entities, and ultimately establishes a contract between the taxpayer and the tax authority (Frank, 2008). Frank (2008) notes, "The advantage of this approach is obvious: Securing government agreement regarding a product's value before importation eliminates the possibility of fines, unanticipated higher duty, or delays should I.R.S.…later determine the good was undervalued." (p. 2) If an APA cannot be or is not established, documentation must be able to justify the price of the good using an approved BALS method.

An additional topic that deserves attention is, that there is a real and identifiable risk that airlines may be audited by tax authorities from outside their home jurisdiction. A 2008 article in the *International Tax Journal* addresses this very issue and points out that, in the past, U.S. based companies engaging in foreign TP activities have primarily had to deal with I.R.S. audits (O'Brien & Oates, 2008). Today, however, there has been a marked increase in not only the number of foreign TP audits, but also the level of sophistication and aggressiveness of these audits. When (rather than if) an airline is subject to a foreign TP audit, O'Brien & Oates (2008) recommend a few key tips:

1. "Take an active role in the foreign tax audit," (p. 8). The authors basically suggest that airline treat the foreign audit with the same gusto and level of seriousness as it would when facing an I.R.S. audit and provide the proper documentation justifying its TP decisions.
2. Seek advice from a foreign tax advisor and "call upon the advisor to give a written opinion…" regarding the TP decision of the airline. This opinion may be critical documentation in disputing an audit decision.
3. Fully review any applicable tax treaties between the U.S. and the foreign country and "preserve its rights to consideration while the foreign tax audit and controversy are pending," (p. 8).
4. If a tax treaty is already present, seek an early consultation with a U.S. competent authority. This consultation can provide information on recent negotiations with the applicable country, as well as addressing other country-specific issues that may prevent value leakage for the airline.
5. Specifically quantify the possible outcome of the audit, both from the foreign audit, and from the applicable adjustments that may arise in the domestic jurisdiction, so that if it becomes necessary to negotiate with the foreign jurisdiction on the TP adjustments, it fully understands the financial implications of the negotiations at home and abroad and to be fully understood.

Ultimately, the key takeaway for airlines regarding preventing value leakage through TP audits is that not only does an appropriate method for pricing the good, intangible asset, or service need to

be selected, but proper documentation must fully support the decision. Without documentation, airlines would expose themselves to a higher level of risk exposure, not only in the U.S. jurisdiction, but also abroad.

Assets

Given the nature of the airline industry, one of the most important discussions regarding TP is also one of the most challenging. The pricing of intangible assets continues to be one of the most difficult issues facing multinational companies. From revenue management - intellectual property (IP) - to slots - to the market power created by long-standing brand recognition (for an airline in particular), intangible assets create an immense amount of value.

Not unlike "traditional" assets, the valuation of intangible assets requires that prices be established by the BALS. While an intangible like a slot (the price airlines pay to garner an opportunity to land at a high-traffic airport—typically heavily controlled and limited) may be more easily valued by market rates, IP presents a steeper challenge for airlines.

As noted earlier, the RPSM is the method most commonly used for non-routine intangible assets (Frank, 2008). Under this method, "the overall profit is split between the related parties based on the functions performed by the related party not owning the intangible assets, with the residual profit allocated to the other related party," (Unknown, n.d.:d, p. 5). So, for mergers involving larger and/or legacy carriers, establishing the residual split will be a high-priority component of preventing value leakage.

An Assurance-Based Approach

A very important piece of the TP puzzle for airlines is to ensure an assurance-based approach is highly valued in the strategic TP plan. For the relatively uncharted waters of airline mergers (particularly international) and TP planning, this starts with a commitment to recognizing TP as a key value addition opportunity and value leakage threat for the airline, specifically when evaluating the transfer of intangibles. Once this has been established, it is important for airlines to ensure they are continually reviewing the strategy to ensure that it evolves with the industry and the airline's individual business.

Robertson-Kellie and Mahalingham (2006) note that "TP is one of the most important business concerns faced by multinational groups today," (p. 4) and continue "an assurance review, update, and ongoing health check of a group's TP process can create substantial opportunities for multinational groups…" (p. 3) The Assurance-Based Approach to TP is intended to ensure that an organization is utilizing the right method of calculating BALS, ensuring that an organization is adequately prepared to defend its position, and ensuring that an organization understands and respects the importance of TP planning for the health of the business.

While short-sighted TP approaches ["TP design and planning with no consideration as to the effective implementation and documentation necessary to sustain the benefits and defend the policy" and "Documentation of existing transfer prices with an annual roll forward of this documentation which does not consider business change or tax mitigation opportunities" (p.3)] will neglect the evolution of the TP environment, adopting an assurance-based approach can produce some positive outcomes for organizations (Robertson-Kellie & Mahalingham, 2006):

1.   Reduced costs associated with TP audits,
2.   Reduced chance of double taxation,
3.   Greater control of the TP process in conjunction with overall internal control process reviews,
4.   Increased expertise in indentifying TP opportunities for lower tax rates.

These outcomes present an opportunity for airlines to not only prevent leakage, but to ultimately add value to their organizations. Additionally, an assurance-based approach can assist in uncovering other strategic planning oversights and errors by carrying through the evolving plan to other areas of their business.

CONCLUSION

Primary Research Opportunities

Several primary research opportunities exist within the scope of TP and airline mergers, with the most obvious being additional attempts to locate TP issues within pending and rumored airline mergers. The most likely choice for further exploration would be various combinations between United Airlines, Continental Airlines, and American Airlines. Additional research opportunities exist with potential U.S. foreign mergers, particularly the most likely possible merger between British Airways, Iberia, and American Airlines.

Narrowing the scope of potential airline merger implications, primary research possibilities exist in the strategic management arena surrounding TP in airline mergers. One topic of particular interest would be primary research involving the level of understanding and conceptual TP strategic planning that occurs within airlines. A way of accomplishing this primary research would be to conduct and analyze an anonymous survey of airline employees and administration.

Opportunities for primary research also exist in the marketing arena. With a high level of value coming from intangibles, brand recognition and TP play an important role in international airline mergers. Primary research on the market power of airline logos and their valuation in the international arena would be a potential option.

A list of hypothesis that may be considered in future research include:

H1:   *International TP miscues exist within the rumored future merger between American Airlines, Iberian Airlines, and British Airways.*

H2:   *Airlines are experiencing a significant value leakage by not actively pursuing a TP strategic plan.*

H3:   *Airline executives do not have an adequate understanding of the implications of TP for the airline industry.*

H4:   *Airlines are not adequately prepared for the TP issues that may arise from the use of intangibles by a subsidiary airline.*

Merger Mania

Facing one of the most difficult economic environments the airlines have faced since deregulation, "merger mania" may be making a re-appearance with a vengeance. Faced with increased costs and decreased load factors, analysts predict that rampant merger rumors are likely to strike the U.S. airline market again with the most likely partners being seen as some combination of United Airlines, Continental Airlines, and American Airlines (Bukoveczky, 2009). However, the challenges the airline industry faces and the subsequent merger mania are not unique to the U.S. market. In fact, talks have been confirmed and rumored in most major travel markets, with the exception of the Asian market (which has thus far avoided the wave of consolidation). Among the top prospects include British Airways and Australia's Quantas (talks have been confirmed), British Airways and Iberia (seeking anti-trust), Austrian Airlines and German's Lufthansa (in the integration phase), Spain's ClickAir and Vueling (approved) and Air Jamaica, Trinidad's Caribbean Airlines, and Antiqua's LIAT (rumored). The domestic mergers present opportunities for airlines to increase efficiencies and reduce the oversaturated capacities that the industry currently faces.

However, "the real prize," *Business Travel World* says, "…is a [EU] deal with [a] major U.S. carrier," (Unknown, 2009a; p. 2). This presents not only opportunities for U.S. airlines, but challenges, as well, and TP issues remain one of the most challenging aspects of mergers and acquisitions. If the Open Skies treaty is amended to relax U.S. and E.U. ownership restrictions, provided they meet antitrust regulations, travelers can expect to see a wave of U.S.-International air carrier mergers, particularly with the legacy carriers who have established international routes and alliances.

TP within the scope of international airline mergers presents unique challenges. Not only does the merger present a complex environment for taxpayers, but the amplified amount of

intangible assets steepens the challenges presented to airlines. Add to these factors the fact that TP audits have increased in scope and aggressiveness both at home and abroad, and U.S. airlines are faced with a uniquely demanding TP environment.

Additionally, airlines may be more likely to be struck with TP problems if one airline effectively acquires another airline, and both airlines continue to operate as separate business entities. Careful consideration of TP issues (particularly with intangibles) should be an active part of strategic planning.

TP not only presents a threat to the airlines if violations are discovered, but can also be a valuable cost-cutting tool. The environment airlines are currently facing requires the industry to seek efficiencies and cost cutting methods (the reason for the push for consolidation). Effective TP planning and execution presents an opportunity for airlines to make a significant impact on their bottom lines through tax liability reduction.

Ultimately, to thrive in such a demanding environment, airlines must stay abreast of TP practices, and most importantly, take an assurance-based approach to strategic TP planning. Value addition or leakage is dependent upon the ability of the airline to understand, execute, and document TP decisions and implications. This understanding, execution, and documentation can represent a significant opportunity or threat to an airline and should be carefully considered at all stages of the strategic planning process.

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A CASE FOR CUSTOMER BASED BRAND EQUITY CONCEPTUALIZATION WITHIN MOTIVATIONAL PERSPECTIVE

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ABSTRACT

Current class of conceptualizations of customer based brand equity (CBBE) which explains the formation of brand equity on the basis of consumers' cognition and behavior are primarily built on the foundations of associative network theory. This paper identifies that theoretically a stable point estimate of CBBE cannot be derivable using this foundation. Primary objective of this paper is to prove this hypothesis using an experimental design. Thereafter, a case is made for re-looking at CBBE within motivational perspective. Accordingly, need for motivational perspective is outlined and a new definition of CBBE is proposed.

INTRODUCTION

Strategic importance of branding is duly recognized in marketing literature. A strong brand is described as a platform for new products, an entry barrier, bulwark against shifts in consumer behavior (Farquhar, 1990), source of (sustainable) competitive advantage (Aaker, 1991), a precursor of success of future marketing activities (Keller, 1993) a source of future profits (Crimmins, 2000), a key organizational asset, the primary capital (Guzman et al, 2006) and as an instrument of competitive superiority (Kepferer, 2000). Value added by a brand to the product is termed as brand equity (Farquhar, 1990). A strong brand is one which possesses high brand equity (Kepferer, 2000, Aaker, 1996). To this extent, it has been empirically proved that high brand equity could result in increase in consumer preferences, purchase intentions (Cobb- Walgreen et al, 1995), brand loyalty intentions (Johnson et al, 2006) and stock returns (Aaker & Jacobson, 1994). Hence brand equity formation, measurement and management deserves key focus both at theoretical and managerial domains.

Brand equity has been the subject of academic inquiry since past decade (Atilgan et al., 2005). Brand equity was initially conceptualized as "added value" which the brand endows the product (Leuthesser, 1988). This "added value" could be discussed from the perspective of the firm or consumer (Farquhar, 1990). From firm's perspective, value added by the brand is discussed under brand valuation (Wood, 2000); whereas from consumers' perspective, value added is discussed under customer based brand equity construct (CBBE) (Keller, 1993). It is suggested that financial perspective of brand equity is only an outcome of consumer perspective of brand equity since

customer based brand equity is the driving force for incremental financial gains to the firm (Lassar et al., 1995) which in turn determines brand value. In spite of diverse research on CBBE there exists no consensus with respect to conceptualization and operationalization of this construct (Winter, 1991; Punj & Hillyer, 2004). Given the importance attributed to CBBE, it is necessary to conceptualize and operationalize this construct in manner which is worthy of pragmatic managerial applicability.

CONCEPTUALIZATION OF CBBE

Aaker (1991, p.15) defined customer based brand equity as "a set of brand assets and brand liabilities linked to a brand, its name and symbol, that add or subtract the value provided by a product or service to a firm and/or to that firm's customers". This conceptualization is based on both cognitive and behavioral underpinnings. This definition is regarded as most comprehensive definition of customer based brand equity (Motameni & Shahrokhi, 1998). Aaker (1996) conceptualized brand equity as consisting of four dimensions namely brand awareness, brand associations, perceived quality, and brand loyalty. Aaker's (1996) operationalization of brand equity has been widely used in universal customer based brand equity scale developments (Yo & Donthu, 2001; Washburn & Plank, 2002; Pappu et al, 2005). No theoretical rationale is offered as to how brand associations are formed and elicited in this framework. Keller's (1993) framework offers more insight in this regard.

Keller's (1993, p.2) conceptualization of customer based brand equity is based upon cognitive psychological underpinnings. Accordingly, CBBE is defined as "differential effect of brand knowledge on consumer response to marketing of a brand" and differential response is measured as "consumer's reactions to an element of marketing mix, in comparison with reaction to the same marketing mix element attributed to the fictitiously named or unnamed version of product or service". Brand knowledge is conceptualized as brand node in human memory to which variety of associations are linked. Term "node" is consistent with associative network theory (ANT) while referring to a packet of information (Anderson, 1983). According to this theory, human memory consists of nodes and links connecting these nodes. Upon encountering an internal or external cue, a node gets activated and the activation spreads to connecting node and so on as long as sufficient threshold level for a node to become activated is maintained. As each node becomes activated, information contained in the node is recalled by the subject.

CRITIQUE OF 'ANT' BASED CBBE CONCEPTUALIZATION

It is lately suggested that the links between brand nodes are asymmetric in strength (Romaniuk and Sharp, 2004). For example, given the cue "HP", a consumer might recall a "printer", but given the cue "printer", consumer might not immediately recall "HP". It is also realized that

cues that activate brand nodes engender from both internal and external sources and many of them might not necessarily suggest a brand but could increase the probability of a particular brand / set of brands being considered for choice (Romaniuk and Sharp, 2004). For example, being in film theater might engender the consumer to eat/ drink something "refreshing" and the consumer might consider a cola drink, popcorn bag and chocolate bar to be equally refreshing. The cue here is activated from external environment and doesn't suggest a brand or industry defined product category. Thus, it may be conceived that different cues could result in different "sets" of options (product categories, brands) which the consumer might consider (Holden and Lutz, 1992). Hence, it can be postulated that as brand node and subsequent brand association(s) elicitation (brand knowledge) is variable with reference to chosen cognitive path of activation (because of asymmetric links between brand nodes) and the cue(s) encountered by the customer. This qualifies (brand) associative network to be a fuzzy structure (Barsalou, 1983). Extending this argument within the Keller's (1993) framework, it may be inferred that consumer's evaluation of brand equity might significantly differ for the same brand in two contrasting contexts if the same brand node is evoked by two different cues leading to different cognitive paths of activations. Hence, a statistical point estimate of CBBE might not be derivable based upon this foundation.

Keller (1993) conceptualized brand knowledge as consisting of brand node, to which variety of associations are linked. Above theoretical evidences suggest that brand knowledge is a dynamic construct as retrieval and processing of associations is cue specific. In such case, CBBE, which is the differential effect of brand knowledge should also vary according to the "context" in which brand is retrieved from the memory. This paper attempts to prove this hypothesis using an experimental design approach.

RESEARCH METHODOLOGY

Data Collection

MBA students of a reputed business school in south- central India were considered for the study. Study spans across three product categories. Each product category comprises of two brands. Each brand has to be evaluated in two different contexts. One questionnaire dealt only with one product category, thus three independent questionnaires were framed to capture responses on three product categories. No two product categories were evaluated by a single respondent. Hence, each respondent evaluated two brands pertaining to same product category in two hypothetical contexts. A total of one hundred and fifty questionnaires were distributed equally among three product categories. One hundred and five valid responses were obtained.

For product category pens, contexts were: intending to purchase pen for class room use, intending to purchase a pen as a gift to a friend. For product category courier services, contexts were: intending to avail courier service for delivering vacation photographs, intending to avail a

courier service to post an application for job with deadline nearing. For product category laptops, contexts were: intending to purchase a laptop predominantly to use MS Office based applications, intending to purchase a laptop essentially for sophisticated gaming and movie watching.

Table 1: Research Design			
Product Category	Brand	Context	
Pens	Reynolds	Class use	Gifting
	Parker		
Courier services	India Post	Standard Delivery	Expedite Delivery
	Blue Dart		
Laptops	Acer	Data Analysis and Reporting (D A & R)	Multimedia
	Viao		

Questionnaire Design

Respondents' familiarity of the brands was assessed on a seven point semantic differential scale anchored at ends as highly unfamiliar and highly familiar. To assess customer based brand equity, overall brand equity scale proposed by Yo and Donthu (2001) was used in the study. Respondent had to evaluate the scale for each brand in two different contexts.

RESULTS

To assess familiarity of the respondents with respect to brands used in the study, a single tail t-test with null hypothesis as familiarity score for brand considered is less than the scale mean. Significance at one percent for all the brands was achieved. This suggests that respondents were quite familiar with brands used in the study.

Table 2: Respondent's mean familiarity with brands used in the study					
	Mean Familiarity	Std. Error	t	df	Sig. (1-tailed)
Reynolds	6.54	0.185	13.752	34	0
Parker	6.4	0.197	12.154	34	0
India Post	6.13	0.201	10.605	30	0
Blue Dart	5.52	0.304	4.993	30	0
Acer	5.15	0.299	3.837	33	0
Viao	5.71	0.237	7.196	33	0

A paired t-test was performed to test for difference in CBBE measure across contexts for each brand. Significance at one percent was achieved for all the brands considered in the study.

Table 3: Paired t-statistic for CBBE measure across contexts					
Product Category	Brand	Context [Mean CBBE (st dev)]		n	Statistic [paired t (sig)]
Pens		Class use	Gifting	35	
	Reynolds	2.96 (.91)	1.97 (.87)		5.39 (0)
	Parker	2.52 (1.0)	4.40 (.74)		-10.575 (0)
Courier Services		Standard delivery	Expedite delivery	31	
	India Post	3.79 (.843)	3.05 (1.44)		3.13 (.004)
	Blue Dart	2.91 (.95)	3.64 (1.159)		-3.47 (.002)
Laptops		DA & R	Multimedia	34	
	Acer	2.98 (.73)	2.32 (.72)		4.76 (0)
	Viao	3.32 (1.05)	3.95 (.84)		-3.46 (.002)

These results clearly suggest a significant difference in the evaluation of same brand in two different contexts. Therefore, building upon the definition of Farquhar (1990), it is proposed that though brand equity can be favorably conceptualized as value added by a brand to product; in a consumer context, it can be demonstrated that, amount of value added by the brand might vary according to purchase situation. In such a case, two pertinent questions of marketing interest emerge:

- Generally in which situations, brand adds more value?
- Does the manner in which brand adds value differ amongst different consumers?

These concerns were put forth earlier too. Schreuer (2000, p.5) opines "…marketing must be in a position to create branding that is based on delivering critical elements of value, and must design marketing communications and customer experiences to reinforce that value." It is assumed that answers to above questions can be partially sought by shifting the frame of reference from cognitive psychology perspective to motivational perspective.

ENGENDERING A MOTIVATIONAL PERSPECTIVE OF CBBE

Jenkins (1966) explicated motives as reasons behind an agent's action. Kagan (1972) defined motive as individual's cognitive representation of future goal with no necessary relation to either

action or affect and goal as a (future) state which enables the individual (read as consumer) to feel better. In the context of consumer behavior, motives can be operationalized as reasons behind consumer's purchase (Assael, 1984). Motive when activated leads to motivation (Kagan, 1972). It is suggested that greater the alignment of consumer's perceptions of the brand with his/her motives, the greater is the likelihood that the consumer will prefer that brand over others (Mahatoo, 1989). A similar view has been espoused in "the theory of buyer behavior" by Howard and Sheth (1969). According to this theory, a consumer consumes brand to fulfill his (product related) motives and motives when fulfilled by the brand leads to customer satisfaction. The same view is again endorsed by Bagozzi and Dholakia (1999) as they state consumers purchase those products / brands which enable them to achieve their end state goals. Based on theory of goal systems (Kruglanski et al, 2002), it can be proposed that in a choice task consumer prefers that brand which has greatest ability to maximize the subjective utility of a motive or set of (competing) motives. In other words consumers will prefer that brand which closely fulfills those motives which they consider important and it is supposed that this preference is also reflected in CBBE measurement.

AN ALTERNATIVE EXPLANATION FOR RESEARCH PHENOMENON USING MOTIVATIONAL PERSPECTIVE

Given the operational definition of motive as reason behind purchase, the contexts which were discussed earlier can now be rephrased as motives. This research has then attempted to understand whether consumers' evaluation of brand differs according to motives. Significance in t-test (table 3) proved that consumers evaluate brands differently in different motivated conditions. Hence existing scales of CBBE might not be generalizable as evaluation of CBBE varies according to salience of motive.

In the current study, in each context, one motive is primed as prominent driver of choice or "made salient", and consumers evaluation of brand, as supposed, differed across different these contexts. As observed from table 4, an attempt has been made to analyze CBBE across different brands for same motive and in three out of six cases, consumers perceived one brand to significantly out performs other with respect to given motive. Results therefore prove the underlying importance of motive in consumers' assessment and evaluation of brand.

DISCUSSION

In this experimental setup, only one motive is made salient in each situation to demonstrate the effect of each motive upon CBBE. However, in a real purchase situations, consumer is confronted with multiple competing motives while evaluating a brand where few motives are made salient by external conditions (extrinsically salient motives) and few motives are made salient habitually without any external cue (intrinsically salient motives). Intrinsically salient product

related motives can be thought of as enduring goals which are immediately bought into mind with respect to product category. For example a consumer who is inherently weight conscious may be generally motivated to purchase only those processed foods which are low in calories. "Calorie consciousness", hence, can be termed as intrinsically salient motive related to product category processed food. In a particular case of celebration, the same consumer might consume tasty food which is high in calories. This behavior is not enduring but apparent only because of imposition of external situation of celebration. In this case, consumer is motivated by taste. "Taste", here is extrinsically salient processed food related motive be as it can be related to cue from external surroundings which has modified the behavior. Based upon this discussion, it can proposed that consumer preference can modeled as a function of extrinsically and intrinsically salient product related motives.

Table 4: Paired t-statistic for CBBE measure across brands					
Product Category	Motive (Context)	Brand [Mean CBBE (st dev)]		n	Statistic [Paired t (sig)]
Pens		Reynolds	Parker		
	Regular use (Class use)	2.96 (.91)	2.52 (1.0)	35	2.01 (.052)
	Gifting	1.97 (.87)	4.40 (.74)		-14.223 (0.00)
Courier Services		India Post	Blue Dart		
	General delivery (Standard delivery)	3.79 (.843)	2.91 (.95)	31	3.42 (.002)
	Speed & safe delivery (Expedite delivery)	3.05 (1.44)	3.64(1.16)		-1.375 (.179)
Laptops		Acer	Viao		
	Productivity (DA & R)	2.98 (.73)	3.32 (1.05)	34	-1.469 (.151)
	Entertainment (Multimedia)	2.32 (.72)	3.95 (.84)		-7.648(.000)

Preference has to be demarcated from CBBE. Preference can be bound within a context and hence can vary across contexts but CBBE is theoretically expected be stable over time because goal of the management is to sustain and improve brand equity long term (Aaker, 1991, Keller 1993). This goal cannot be monitored/ accomplished if CBBE is deemed unstable. An attempt has been made in this paper to prove that existing CBBE measures vary across contexts/ motives and are therefore deemed inappropriate for managerial use. In preceding section, it is proposed that motives direct evaluation / choice of brand and consumers pursue only those brands which fulfill their salient motives. Accordingly, it is proposed that CBBE is "a measure of degree of correspondence between consumer's intrinsically salient product related motives and perceived potential performance of the

brand upon those motives." Intrinsically salient product related motives are emphasized because these motives are enduring over time and in absence of external constraints, consumer's choice is based upon them (Ratneshwar et al, 2001).

An operationalization based upon this definition has clear advantages over existing measurement schemes. It is stable over time and hence CBBE can be monitored over time without attributing increment or decrement of CBBE to contextual situations. All those related and unrelated product categories which address similar (set of) intrinsically salient motives could be considered as competition for existing product category. For example, even though milk shake and cool drink seem as if they belong to unrelated product categories, if it is observed that target customers substitute either of them when they are thirsty (motive 1) or exhausted (motive 2), and these motives being identified as intrinsically salient in determining choice for both the product categories, then cool drink brands should start considering milk shake brands as relevant competition and vice-verse. Further, by ascertaining how consumers weigh different motives in determining brand choice, it becomes possible to heuristically segment consumers with respect to given product category.

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THE EFFECT OF MEMORY STRUCTURE AND FUNCTION ON CONSUMERS' PERCEPTION AND RECALL OF MARKETING MESSAGES: A REVIEW OF THE MEMORY RESEARCH IN MARKETING

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ABSTRACT

Marketers have long recognized the important role that memory plays (e.g., by affecting consumer perception and recall of marketing messages) in the decision-making processes of consumers. In this article, we provide an overview of consumer memory structure and function. We then extend our review to examine the impact that consumer memory has on the evaluation of marketing generated information, the role that consumer involvement has in the recall and influence of marketing messages, and the affect that interference from similar competing brands has on consumers' ability to remember specific brand information. Finally, we address some of the methodological problems associated with memory structure measurement and identify areas for future research.

INTRODUCTION

Memory plays an important role in the decision-making processes of consumers by affecting their perception and recall of marketing information. Consumers knowingly and unknowingly use information stored in memory to make a myriad of decisions ranging from what brand and flavor of gum to purchase to what make and model of car to buy (Schiffman & Kanuk, 2007). Thus, the ability of consumers to recall marketing generated information has a major impact on their purchasing decisions. Unfortunately, because of the structural and functional limitations of consumer memory (Bettman, 1979), much of this information is never attended too or even, forgotten. Thus, an understanding of the nature of consumer memory and memory functions has important implications for marketers.

The goal of this article is to address this need by providing an overview of the memory research in marketing. In particular, we focus on three memory-related issues:

1)   the impact that consumer memory structure has on the evaluation of marketing generated information;

2)   the role that consumer involvement has on the recall and influence of marketing messages; and

3)   the affect that interference from similar competing brands has on consumers' ability to remember specific brand information.

This research has important academic and managerial implications. First, though research has been conducted regarding the affect that memory has on consumer perception and decision making, there is considerably more work that remains to be done. Thus, it is our hope that this review will encourage researchers to intensify their efforts in this important area of study. Second, in the preparation of this article, a number of methodological problems were identified. Though we offer some recommendations in this article to address these problems, more in-depth theoretical and empirical development is clearly needed. Finally, organizations continue to devote extensive financial resources to reach, inform, and influence consumers (Armstrong & Kotler, 2007). Unfortunately, memory-related problems/limitations may dramatically reduce the outcomes of these efforts. By providing marketers with insights regarding the nature and limitations of consumer memory and its affect on perception and recall, the return on their advertising and promotional investments should be substantially improved.

We begin this review by providing an overview of memory structure and function. We then examine the memory research in marketing pertaining to consumer memory structure, consumer involvement, and competing brand interference effects. Finally, we address some of the methodological problems that currently exist in measuring memory structure and identify some directions for future research.

AN OVERVIEW OF MEMORY

Memory may be conceptualized as a series of storage systems with differing functions and properties (Bettman, 1979). A typical model includes a set of sensory stores, a short-term memory store, and a long-term memory store (Atkinson & Shiffrin, 1968). In these models, information passes from the sensory organs to the sensory stores and, if attended to and processed, is moved to the short-term memory store. The short-term memory store processes the information from the sensory stores and essentially acts as the center of current processing activity (Bettman, 1979). Information from the long-term memory store may be retrieved and included in the processing of information in the short-term memory. Finally, a portion of the information in short-term memory may be stored in long-term memory for future use.

There are three well accepted models of memory (Bettman, 1979): the multi-store model, the level of processing model, and the activation model. The multi-store model posits that the

sensory stores, the short-term store, and the long-term store are distinctly separate memory stores. However, there is considerable evidence to refute the strict interpretations of the multi-store model (Postman, 1975). In contrast, the level of processing model (Craik & Lockhart, 1972) provides a conceptualization of memory that is not encumbered by the distinct memory stores paradigm.

The level of processing model posits that individuals have limited processing capacity which may be utilized for information processing (Craik & Lockhart, 1972). According to this model, there are differing levels of processing that place varying demands on the limited processing capacity of the individual. For example, sensory analysis has a low level of processing whereas elaboration of information has high levels of processing. Therefore, the processing of sensory information requires less capacity allocation than cognitive elaboration of information. Furthermore, the level of processing model hypothesizes that the level of information processing determines the retention of that information for later use since higher elaboration of information is associated with higher levels of processing and long lasting memory (Craik & Tulving, 1975).

Similar to the level of processing model, the activation model is also not encumbered by the paradigm of distinct memory stores. The activation model posits that there is one memory store wherein only limited portions may be activated at a given point in time. Accordingly, only the activated portion of memory may be used for processing current information (Bettman, 1979). Furthermore, the activated portion of memory will be lost unless further effort is expended to maintain activation. A useful visualization for the activation process is that of a series of wires that glow brightly when activated then dims slowly if activation is not maintained.

The three prevalent models of memory appear to be theoretically incompatible, yet the three theories may be liberally viewed as an activation model (Bettman, 1979; Craik & Lockhart, 1972). The perspective of the multi-store model is consistent with the view that the short-term store is a temporary activation of memory stored in the long-term store (Shiffrin & Atkinson, 1969). Furthermore, the levels of processing model may be viewed as an activation model since the allocation of limited capacity is consistent with the paradigm of limited activation of memory (Bettman, 1979). Therefore, the most widely accepted model of memory appears to be the activation model.

There are two basic uses of memory. The first involves the storage of information in long-term memory and the second is the retrieval of information from long-term memory. These are separate functions yet they are not independent of each other. Furthermore, these functions occur simultaneously. The differences in these functions impact the construction process used in response generation potentially leading to incomplete retrieval of information from long-term memory. To address this, individuals have differing strategies on how and what to process, what is stored in long-term memory and how to store it and retrieve it, and so on. These processes are called memory control processes.

Memory Control Processes

Memory control processes are strategies that individuals use to direct information flow into and out of memory (Atkinson & Shiffrin, 1968; Bettman, 1979). These processes may be controlled by the individual or may be automatic. The six types of memory control processes are rehearsal, coding, transfer, placement, retrieval, and response generation.

Rehearsal involves the mental repetition of information or the recycling of information through short-term memory. Two roles are typically assigned to rehearsal: 1) information maintenance in short-term memory and 2) information transfer to long-term memory. According to Bettman (1979), rehearsal is best characterized as an allocation of processing capacity that is performed in accordance with the requirements of the task and the individual's goals. Also related to rehearsal is the coding strategy of the individual. Coding involves the associations between the rehearsed information and the data from long-term memory (i.e. the way that information is structured by the individual for rehearsal).

The transfer process involves the decision of what information to store in long-term memory and in what form to store it in (Bettman, 1979). The expected use of the information plays a significant role in determining what information is stored and the type of storage (Shiffrin & Atkinson, 1969). Furthermore, based on the perspective that individuals are cognitive misers (Wyer & Srull, 1989), the easiest transfer strategy will be employed based on the expected use of that information. For example, the rigor of the transfer strategy will be greater if the individual expects that recall is required versus mere recognition of that information. The placement of information in long-term memory has significant implications in the memory process. Placement, from a memory structure perspective, is not related to a physical location, but to the association structure that is created during item processing (Bettman, 1979). The placement of information has significant implications relative to later retrieval since retrieval of information depends on the reconstruction of that particular placement strategy.

Finally, the retrieval of information from memory is a critical part of the memory process. If the process used for coding, transfer, and placement cannot be reestablished, the ability to access an item in long-term memory may be seriously limited. From this perspective, forgetting is not related to the loss of information in long-term memory but to the failure of the retrieval process. Thus, remembering may be viewed as a constructive process and, as such, may be subject to distortion since items stored in long-term memory are not stored exactly as they were entered and completely recalled when desired. Specifically, individuals will use partial recollections from long-term memory with the gaps being filled by his/her expectations of what "must have been" (D'Andrade, 1974). Interestingly, research aimed at the retrieval process indicates that retrieval of information from long-term memory is facilitated when the situational context during retrieval matches the expected retrieval context during the storage process (Ahn & LaFerle, 2008; Thomson, 1972; Thomson & Tulving, 1970).

Despite these processes, there are a number of functional limitations that reduce an individual's ability to process information in short-term memory and to retrieve information from long-term memory.

Properties of Short and Long-Term Memory

It is widely accepted that short-term memory has limited processing capabilities. Miller (1956) hypothesized that the short-term memory is capable of simultaneously processing only seven (plus or minus two) chunks of information. According to Miller, a chunk is a configuration that is familiar to an individual and is capable of being manipulated as a single unit. In other words, a chunk is an organized cognitive structure that expands as information is added to it (Bettman, 1979). Therefore, the processing capabilities of the short-term memory may be increased by the development of larger chunks, which is related to the degree of familiarity with and previous exposure to the information content of the chunk. Furthermore, processing demands on the short-term memory may also reduce the capacity to process information (Newell & Simon, 1972). For example, if part of the total capacity of short-term memory is used for a given task, less capacity remains for chunk processing. Therefore, the normal capacity of seven chunks may be reduced to two or three chunks as other tasks such as search processes or counting tasks are undertaken simultaneously (Bettman, 1979).

The time required to transfer an item of information to long-term memory provides yet another limitation of short-term memory. Newell and Simon (1972) found that five to ten seconds are required to transfer and place one chunk of information into long-term memory that is to be recalled. As expected, the processing time for one chunk of information that is to be recognized is considerably less at two to five seconds per chunk. However, these processing times should only be used as an approximation since the rehearsal and coding strategy used by an individual will impact the processing time per chunk (Bettman, 1979).

In contrast to short-term memory, the long-term memory is hypothesized to be an unlimited and permanent store (Bettman, 1979). Semantic concepts and the associations among them is an important part of what is stored in long-term memory (Anderson & Bower, 1973; Quillian, 1968). Such concepts may include objects and the attributes of objects, events, processing rules, and so on. The long-term memory of semantic information is believed to be organized as "a network of nodes and links between nodes, with the nodes representing concepts and the links denoting the relationships between concepts" (Bettman, 1979, pp. 42). According to Collins and Loftus (1975), each link has a strength relating to how important that link is to the meaning of the concept. The processing of a concept involves activating the node corresponding to the concept of interest with activation spreading throughout the network along the links. In other words, the activation of a concept (node) leads to the activation of other concepts (nodes) that are linked to that concept (Lerman & Garbarino, 2002). The activation continues to spread throughout the memory structure

while decreasing in strength over longer semantic differences (i.e. spreading activation). New data is stored in long-term memory by creating a series of links between a new concept and an already stored concept (Bettman, 1979).

MEMORY RESEARCH IN MARKETING

So how does memory affect consumers' perceptions and ability to recall marketing messages? In this article, we look at three specific aspects of memory that have been studied in the marketing literature. First, we examine the effect that schema-based knowledge structures have on memory. Then, we address the affect that involvement has on consumers' ability to recall and recognize information for future use. Finally, we look at the impact that interference between a brand and other similar competitive products has on consumers' ability to remember marketing messages. It should be noted that the information provided here is not intended to be a comprehensive review of the memory research in marketing. For example, individual differences such as gender and emotional disposition which have been shown to impact memory and elaboration of message cues (Lee & Sternthal, 1999; Meyers-Levy & Sternthal, 1991) have not been addressed.

Schemata Related Issues

The long-term memory is organized in a hierarchical manner based on three levels of concept categories (Rosch, 1978) from the more general superordinate level, to the more specific basic level, and then followed by the even more specific subordinate level. The most abstract level is the superordinate categories, which are the largest and most general categories containing only a few attributes (i.e. furniture). The superordinate categories contain categories at the basic level, which contain concepts with attributes shared by essentially all members of the category (i.e. chair, couch, etc.). Similar to the superordinate categories, the basic categories also contain subordinate categories, which are composed of concrete, tangible concepts. However, the concepts in the subordinate categories have attributes that overlap those of the other categories. For example, the Honda Accord may have many of the same attributes as the Ford Focus or an S-10 Pick-up truck.

In addition to concepts being hierarchically organized into categories, concepts may be hierarchically organized into more complex organizational structures (Marks, 1985). In particular, this organizational structure involves three levels: concepts, propositions, and schemata. Concepts are signaled by, but not equivalent to, word and phrases (i.e. dog) whereas propositions are similar to phrases in that they can combine basic concepts into more complex structures. Schemata are a combination of a number of propositions or a network of interconnected concepts and propositions and can be conceptually viewed as a set of related concepts that may be activated together and which guide the thought process (Marks, 1985). Schemata have been classified into several basic types

such as concept, object, self, scene, person, action (scripts), and causal schemata (Fiske & Taylor, 1991).

The schema categorizations can be related to a marketing context. For example, object schemata are created from brands, product types, and product classes while action schemata are created from the process of shopping for and the purchasing of products. Action schema are typically called scripts in the marketing literature. Scripts contain an individual's generalized knowledge about specific events. Scene schemata are created from what an individual knows about the layout of a particular retail establishment while an individual's knowledge about the effects of using a particular product and the benefits derived from that product's use create causal schemata Schema Congruity. Consumer behavior researchers have investigated schema from a number of perspectives. Schema is important in consumer memory research because it impacts how consumers perceive and ultimately accept or reject the claims made by marketers. Claims that are dramatically incongruent may be rejected or altered by consumers. In contrast, if the claims are significantly aligned with consumers' schema then the message may not receive adequate attention from consumers to influence their attitudes and behaviors. Research indicates that a moderate level of incongruity may be ideal for influencing consumer's affect toward a product or service. According to Mandler (1982), the affect generated by responding to moderate incongruity will be more favorable than that typically created by responding to either congruity or extreme incongruity.

In support of Mandler's hypothesis, Meyers-Levy and Tybout (1989) find that varying levels of incongruity between the product features and the consumers' schema regarding that product impacts the favorableness of their evaluations regarding the product. Furthermore, their results suggest that moderate schema incongruity may produce favorable product evaluations even when the alternative schema activated in the evaluation process was itself unfavorably evaluated. Basically, resolution of the incongruity is hypothesized to be a rewarding process, which leads to positive affect; however, extreme incongruities results in more negative evaluation of the product due to the frustration of being unable to resolve the incongruity.

Despite the advances made in the schema congruity area, this research appears to suffer from generalizability problems. For example, the impact of moderate levels of incongruity may be different for experts than for novices. Experts possess more differentiated category structures than novices indicating that their response to incongruity may be totally different than that of novices (Meyers-Levy & Tybout, 1989). Therefore, additional testing is needed to determine the impact of moderate levels of incongruity on consumers of varying levels of expertise, age, and brand loyalty.

Brand Name Associations

Marketers have used meaningful brand names to improve the recall of advertising claims for many years. Manufacturers of products like Brawny paper towels or Mr. Clean bathroom cleaner have successful used this approach to position their products based on a particular product benefit.

Research by Keller, Heckler, and Houston (1998) found that brand names which semantically suggest a product benefit are associated more strongly in memory and facilitate recall of that benefit (Wanke, Herrmann & Schaffner, 2007). Unfortunately, this approach may hinder the creation of new brand associations if product repositioning is later attempted. For example, if the manufacturer of "Tough Stuff" pot cleaner wanted to reposition their product as a fine-porcelain cleaner, the brand name "Tough Stuff," which is an asset in the pot cleaner market will most likely become a liability in the fine porcelain market. Furthermore, research by Meyers-Levy (1989) indicates that a suggestive brand name (i.e. leading to many associations) may actually lower brand name recall since these associations may cue competing concepts thereby increasing interference.

Clearly, there appears to be some controversy regarding the effectiveness of suggestive brand names. Some research indicates that a suggestive brand name leads to increased associations thereby facilitating memory; however, other research indicates that increased interference effects may occur because of the increased number of associations related to the brand name. Therefore, additional research is needed to better define the tradeoffs between the association effect and the interference effect relative to meaningful brand names. Furthermore, the generalizability of the brand name effects should be investigated for products that require less involvement during the purchasing process (i.e. consumer non-durable goods) and with less information-intensive advertisements (i.e. television commercials).

Scripts

Scripts (action schemata) are a type of schemata that have received a great deal of attention in advertising. According to Smith and Houston (1985), scripts are distinct from other types of schemata in that they contain a set of component actions that are related in a causal temporal sequence. Script research (Puto, 1985) suggests that consumers recall script interruptions better than standard script actions. Interestingly, no significant difference was noted between the recall of a script interruption in a typical script versus that of an atypical script which seems to explain why some firms like Wisk laundry detergent have successful used atypical scripts while other firms like McDonalds have used more typical scripts with similar success. However, it should be noted that Puto's research only involved a pilot study. Additional research should be performed to verify and refine the results of his research. For example, the results from Puto's research did not identify a difference between moderate and strong interruptions relative to interruption recall. Logically, a stronger interruption should lead to better recall than that of a moderate interruption. Furthermore, the use of written scripts instead of visual scripts (i.e. television advertisements) may have accentuated the results because of the increased elaboration associated with the process of reading.

Involvement

The level of consumer involvement in advertised messages appears to play a major role in the recall and the degree of influence that the message has on consumers (Loken, 2006). The level of consumer involvement is conceptualized as the amount of attentional capacity that is devoted to encoding a particular piece of information (Craik & Lockhart, 1972). According to the Elaboration Likelihood Model (Petty & Cacioppo, 1981), higher levels of consumer involvement are associated with higher levels of cognitive effort and improved memory of advertised information (i.e. central processing). However, not all products will be considered personally relevant to consumers (i.e. high-involvement products); for these low involvement products, a peripheral processing route that is persuasive yet low in cognitive elaboration is desired.

Batra and Ray (1986) found that repetition tends to increase brand attitudes in low-involvement conditions when support and counterargument generation are low. However, as involvement levels increase, the persuasiveness of the message on the consumer's attitude toward the brand may decrease because of increased self-generated evaluative thought. In essence, involvement increases memory but often decreases persuasion.

Hawkins and Hoch (1992) studied the proposition that through repetition of a message, consumers come to believe the claim that is being made in the message under conditions of low involvement. This phenomenon has been labeled the "truth" effect (Hasher, Goldstein & Toppino, 1977). The "truth" effect may be caused by recognition and familiarity with a message such that when consumers believe that the message "rings a bell" they are more likely to judge the statement to be true. It is hypothesized that repetition activates or primes the general topic, which creates a sense of familiarity and a corresponding increase in belief. However, the "truth" effect will only occur for claims that are more ambiguous; claims that are blatantly true or false are unlikely to increase belief with increased repetition. Furthermore, Burke and Srull (1988) suggest that repetition has a positive effect on recall only when there is little or no advertising of similar products. Advertisers have successfully used this principle through the use of jingles. Jingles provide a method of low involvement repetition, which over time tends to increase the believability of the jingle's message due to the "truth" effect.

In a similar vein, Hawkins, Hoch, and Meyers-Levy (2001) studied the effect of repetition-induced increases in the belief of advertising claims that are hierarchically related. In particular, they investigated the notion of vertical and horizontal spillover relative to superordinate and subordinate concepts. The example provided in their article involves a home security system and the vertical spillover from subordinate concepts like professional installation and pick resistance and the horizontal spillover between these subordinate concepts. Their research indicates that there is a substantial amount of vertical spillover from the subordinate feature claims to the superordinate general benefit claims and that the feature claims act as a peripheral cue to support the general product benefits. In effect, the use of subordinate feature claims results in a generalized acceptance

that the product provides a benefit without specifically stating the benefit or the claim thereby leading to increased belief in the authenticity of those claims.

Despite the considerable insights provided by these researchers, research in consumer involvement appears to suffer from conceptualization and measurement problems (Schiffman & Kanuk, 2007). In particular, there does not appear to be a clear definition regarding the essential components of involvement resulting in measurement problems. Some researchers argue that involvement is a cognitive state, while others believe that the behavioral aspects or the degree of importance the product has to the consumer should be used to measure involvement. Furthermore, many researchers agree that involvement should be measured on a continuum, rather than as a dichotomy consisting of two mutually exclusive categories of "high" and "low" involvement. Therefore, the definition and measurement of involvement should be better established in order to encourage additional research in this important area of consumer memory research.

Interference

The forgetting of brand information by consumers is a significant concern of marketers. Evidence from memory research indicates that forgetting is not only due to the passage of time but also to additional learning that occurs during that time. Therefore, consumers are more likely to forget old information if they subsequently learn new information relative to a specific product offering. This process is called retroactive interference. In the case of brand information, additional information learned about a brand or similar competing brands may limit the consumer's ability to recall old information about a brand's attributes. A number of researchers (Bagozzi & Silk, 1983; Bettman, 1979; Percy & Rossiter, 1980) have argued that competition between new and existing information may inhibit consumers' memory of advertisements. Moreover, Baumgardner, Leippe, Ronis, and Greenwald (1983) found that brand evaluations deteriorated more rapidly when brand ads appeared in the same product class rather than in the context of messages of dissimilar products. In other words, advertising of similar products may inhibit the consumers' ability to remember brand information.

Burke and Srull (1988) extended earlier research and found that advertising for competing brands or even other products offered by the same manufacturer may inhibit consumers' ability to remember advertised brand information. Burke and Srull posit that a major contributor of forgetting is due to consumers' inability to retrieve brand information from memory. Furthermore, the amount and importance of interference induced forgetting appears to depend on the motivation of the consumer at the time of ad exposure and the type of product advertised. For example, if the purchase involves a low involvement product and the consumer believes that product information will be available at the point of purchase, he/she will most likely rely on brand recognition rather than recall of specific brand features. However, if the purchase involves a high involvement product and the consumer expects that limited point of purchase information will be available, then that same

consumer will increase the amount of cognitive effort to enable recall of salient product features consistent with Wyer and Srull's (1989) characterization of consumers as cognitive misers.

Overall, interference effects are an important consideration in marketing; unfortunately, there is more to be learned in this area. For example, the impact of consumers' product knowledge level should be investigated since high-knowledge consumers are better able to learn and retain complex information than low-knowledge consumers. Furthermore, high-knowledge consumers may have more defined schema regarding the salient attributes of a given product thereby reducing the effects of interference from similar product offerings.

METHODOLOGICAL CONSIDERATIONS

There are a number of methodological problems associated with memory research. Memory research relies on a number of measurement procedures to measure knowledge structures (Mitchell, 1982). In the elicitation procedure (Olson & Muderrisoglo, 1979), memory researchers apply memory probes to subjects and ask them to mention everything that comes to mind. Unfortunately, this method has a limitation in that researchers have been unable to exactly define what probes are to be used to determine a subject's knowledge in a particular domain. Another measurement procedure requires subjects to perform a particular task that involves the retrieval of information from long-term memory (Russo & Johnson, 1980). Similarly, questionnaires have been used to measure the knowledge structure within a given domain. Unfortunately, both techniques involve constructive processes, which may be subject to distortion caused by limitations in information retrieval from long-term memory. Finally, researchers use response times to measure knowledge structures; however, these types of measures require a theory of memory for interpretability. For example, if a researcher subscribes to Wyer and Srull's (1989) comprehensive model, then it seems logical to posit that more recent information and more salient information will have shorter response times.

Overall, there appears to be considerable debate about which measures provide the researcher with better estimates of the knowledge structure within a particular domain. The ability to determine what consumers actually know about a subject domain may never be completely possible due to the limitations inherent in information retrieval from long-term memory and because of the complexity and uniqueness of the schematic structure itself. However, Smith and Houston's (1985) rank order method appears to be a promising way to measure consumer script structure. The rank order method requires subjects to perform recognition tasks by distinguishing between actions relevant and irrelevant to an event and then to arrange the relevant actions in the script defined order (rather than relying on retrospective self-reported measures) thereby reducing the amount of distortion caused by the retrieval process. The rank order measure appears to provide a modest level of convergent validity with other similar measures.

Another methodological problem involves the dependence on high elaboration settings during laboratory testing. In many studies, subjects are instructed to closely evaluate an advertisement for a significant time period; furthermore, subjects are told that they will be asked questions regarding that advertisement. This results in an unusually high level of elaboration, which in most circumstances does not match the expected conditions faced by consumers during the learning process. Furthermore, the dependence on written advertising should result in higher cognition and better recall of information. In reality, most consumers are exposed to advertisements in lower elaboration settings with more environmental distractions than may be duplicated in a laboratory setting. Therefore, future studies should be performed in a number of different settings in order to determine the impact that environment, media type, and level of elaboration have on the processing and recall of information.

DIRECTIONS FOR FUTURE RESEARCH

It is apparent from this article that there is much more to be learned about consumer memory processes. Overall, our review of the extant literature suggests that research in consumer memory has yet to receive the emphasis it deserves. The area still seems to be plagued with measurement problems and much of the research has been performed under laboratory-controlled conditions. Unfortunately, not much is known regarding the memory process of consumers under more natural conditions. The impact of time pressures, external noise, and other such situational factors should be considered in future research. Furthermore, much of the memory research still relies on deliberate memorization and recall of information; yet, in reality much of the consumer's daily activities involve less involved learning.

In attitude research, a key aspect of any measurement of attitude involves the salience of a product attribute. Salient attributes are those attributes that first come to mind when a consumer thinks of a particular object. It is generally accepted that consumers look at five to nine attributes of a particular type of product when selecting a brand to purchase out of a number of competing brands. Interestingly, the number of attributes evaluated by consumers is the same chunk processing capability hypothesized by Miller (1956). Therefore, it is reasonable to hypothesize that the limitation in number of salient product attributes is related to the chunking limitation of short-term memory.

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LOCATION DECISION MAKING: THE CASE OF RETAIL SERVICE DEVELOPMENT IN A CLOSED POPULATION

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ABSTRACT

Extant literature on site selection highlights the need for scientific research to aid location decisions. In spite of this call, most published research on site selection utilizes neither a well-developed theory of consumer behavior nor considers the influence of competitors' outlets on location decision. This research employs spatial interaction theory, customer density estimates and minimax decision criterion to address site selection issues for a new coffee shop at a university campus. The decision-support model specified in this paper should be of interest to practitioners.

BACKGROUND

Consider the following scenario about a meeting involving facilities planners in a university: "I think there is a need for coffee shop on campus", quipped a senior manager. "What if we built a state-of-the-art coffee shop on campus and nobody came", said another. "Location is the key", replied another. "Let us have it in the newly planned constructions within the Medical School precinct. That should attract the most customers" was the conclusion of the meeting.

The above scenario appears to be a common tactic among managers for selecting locations or sites for businesses ranging from small coffee shops to multi-million dollar establishments (Quirk et al. 2002). Specifically, management intuition tends to replace market research in selecting new locations. More than four decades ago Applebaum (1965) highlighted the need for scientific research to replace intuition in site selection decisions. In spite of this call, most published research on site selection utilizes neither a well-developed theory of consumer behavior nor considers the influence of competitors' outlets on location decision (Lilien et al. 1992; Gonzalez-Benito et al. 2005).

While Geographic Information Systems (GIS) do provide opportunities for spatial analysis for site selection purposes (Joerger et al. 1999; Lilien & Rangaswamy 2002), there is evidence in the literature that its usage is skewed towards large firms (Garry 1996; Hernandez & Biasiotto 2001; Rushton 2003). Furthermore, GIS driven geo-information processing functions do not provide the analyst with an opportunity to specify a theoretical model of consumer behavior to predict new business success at the marketplace. For instance, the GIS software "Enlighten for Retailers" employs demographics and psychographics to profile the population in trade areas (Garry 1996).

However, as aptly observed by Rossiter (1987), psychographics and demographics are far removed from actual customer behavior. To illustrate, consider two customers with similar activities, interests, and opinions (psychographics). While "imitation" or "aspiration" is said to cause or push people with similar psychographics towards a common behavior (Best 2005), it is unlikely that all individuals with similar psychographics will have the same reference group. Further, reference group theory, with "aspiration" as the energizer of behavior, should help better predict sales of socially conspicuous products such as mobile phones and cars; not all types of products. As regards demographics, the literature is replete with failures of demographic variables to differentiate preference for brands (see for example, Sheth & Mittal 2004). Finally, and more importantly, GIS is often unavailable for closed populations such as university campuses. This makes it difficult for managers in such settings to employ off-the-shelf spatial analyses software for site selection purposes. This research is an attempt to assist site selection decisions in such contexts. Specifically, it employs spatial interaction theory, customer density estimates and minimax decision criterion to address site selection issues for a new coffee shop at a university campus.

In all, two research questions guided the construction of the paper:

- Given full awareness of coffee shops, what fraction of a population would prefer each outlet, and

- Which location will produce an optimum share of market potential, and minimum hazard for future sales erosion?

The paper is organized as follows. Section 2 outlines the site-selection model. Section 3 highlights the methodology or more specifically data collection strategies of the study, Section 4 presents the results of the research, and Section 5 concludes with a summary discussion of the study.

SITE SELECTION: THEORIES AND METHODS

Prominent Theories of Business Location

There are at least four explanations or theories of retail location: central place theory, spatial interaction, land value or bid-rent theory, and the principle of minimum differentiation (Brown 1993; Clarkson et al., 1996). It could be said that the first two explanations are customer focused, and the latter two theories are, "supply" or business focused explanations of retail location.

The central place theory (Christaller, 1933) is based on the proposition that consumers shop at locations that are closer to their place of residence. The assumptions of the theory include: an isotropic geographical area with consumers distributed uniformly throughout the region, and transportation costs equal in all direction and proportional to distance. Spatial interaction theory,

on the other hand, posits that shoppers' will place less emphasis on distance if the attractiveness of a far-away shopping location is higher than the nearby shopping destination (Reily, 1931). Put simply, attractiveness of retail locations compensate for the disutility of long-distance travel.

Land value theory moved away from consumer-centric conceptualizations of retail location and turned the focus on to businesses wanting to locate in a specific area. Based on the assumption that consumers are distributed uniformly in a hypothetical landscape, where travel is possible in all directions, the theory maintains that the center of the plane is the low cost location for economic activities (Haig, 1926). The term "land value" refers to the notion that central sites are occupied by businesses capable of paying the highest rents. Finally, Hotelling's principle of minimum differentiation suggests that businesses within the same industry will achieve superior performance if they are clustered together (Hotelling, 1929).

Common Approaches to Site Selection

A variety of different methods have been suggested as aid to location decision-making. For instance, Lilien and Kotler (1983) and Rogers (2004) discuss three approaches: the qualitative, checklist and the analog method of site selection, and the quantitative, gravitational models. As the name implies, checklists assess whether success criteria for business location, such as desired sales potential, exist in a site. Analog methods attempt to predict sales at a proposed new retail facility by comparing it against an existing facility. Clarkson, Clarke-Hill, and Robinson (1996) posit that the qualitative, checklist and analog methods are not based on theory and that they are merely techniques of site selection.

Of the few, quantitative site selection methods that do have theoretical anchors, the gravity model, and its variant the location-allocation model, are based on spatial-interaction theory and the central place theory. Specifically, these models assess the possible location of facilities in a plane; locations could be thought of as nodes in a network. Consumer demand is represented as "weights" in the geographical space. The models could be discrete or continuous, deterministic or stochastic. Berman and Krass (2002), and Kubis and Hartmen (2007) provide summary review of these models. In the following pages, we develop a site selection model that is based on the conceptual foundation of the spatial interaction theory.

Model Specification and Estimation

We begin with the formulations of the spatial interaction theory (Reily, 1931; Huff, 1962; Applebaum, 1965) and combine it with density estimation methods (for instance, Donthu & Rust, 1989), to derive market share of a facility located at *S* (equation 1):

$$M(S) = g_s(x,y)f(x,y)dxdy \qquad (1)$$

where, gs(x,y) is the likelihood that shoppers situated on a two dimensional xy plane would visit the facility *S*, and f(x,y) is customer or more specifically, population density at xy.

In line with Huff (1962, 1963), and Drezner and Drezner (2002), we define g_s(x,y) to be a function of *A*, the attractiveness of the facility and *d*, the Euclidean distance between location x,y and the facility. Given *m* facilities,

$$g_s(x,y) = \frac{\frac{A_s}{d_s}}{\frac{A_s}{d_s} + \sum_{j=1}^{m} \frac{A_j}{d_j}}$$

(2)

where, *d* denotes distance-decay effects. Since distance from customers is not a crucial consideration for a university-campus coffee shop, we do not adjust for costs and disutility of distance (see Black & Larson, 2005; Constantin, 2004; Drezner et al., 2002, for procedures related to adjusting for distance induced disutility in gravitational models).

To assess f(x,y), we utilize the kernel density function (Silverman, 1986) (equation 3).

$$f(x,y) = \frac{1}{nh^2} \sum_{i=1}^{n} K\left(\frac{\vec{x} - \vec{x_i}}{h}\right)$$

(3)

This "smoothes" the population data to avoid the piling up of observations at one point in the xy coordinate. In other words, the population is modeled as a continuous density function over the xy plane. We assume *K*, the kernel function, to be bivariate normal and utilize the 2x1 vector $\vec{x}$ (*argument of the f function*) that contains the xy geographical coordinates for a desired location, and the 2x1 vector $\vec{x_i}$ *that* contains customer location information, to estimate customer density. Note that *h* is the smoothing factor which determines how flat or smooth the density surface would be (Donthu &Rust, 1989). Some other properties of the kernel function include:

(i)   K(x) = K(-x)
(ii)   ∫K(x) dx = 1
(iii) h ➔ 0 as n ➔ 0

To illustrate, assume that a new retail facility (*S*) is planned in a location with four existing competitors (*f*). A sample of five customer segments (*c*) has rated the attraction or attitude towards

visitation and purchase, for each of the existing stores and the new facility, on a five point scale (Table 1).

Table 1: Attraction Scores			
Facility	Location of Facility (xy Coordinates)	Mean Attraction Score (1 to 5 scale)	Population Location (xy Coordinates)
Existing (f1)	2.4, 3.2	3	Segment 1: 1, 2
Existing (f2)	4.3,1.4	2	Segment 2: 2, 2
Existing (f3)	3.2,3.3	5	Segment 3: 3, 3
Existing (f4)	1.4,2.3	2	Segment 4: 3, 5
New	To be determined	3	Segment 5: 4, 5

The question, "Where to locate the new facility in order to maximize market share" can be addressed as follows. First, we compute $g_s(x,y)$ for all locations on the xy coordinates (Figure 1). For instance, if facility S is located at (1,1) there is a 19% chance that customers at location (2,2) would visit the facility: that is, $g_s(2, 2) = 0.1903$ (Computations involve: $(A_s/d_s) = (3/1.41421) = 2.12133$, and

$$\sum_{j=1 \text{ to } m} (A_j/d_j) = [(3/1.26) + (2/2.37) + (5/1.76) + (2/.67)] = 9.02$$

Combining the two results provide 0.1903).

Next, we assess customer density $f(x,y)$ using equation 3. This involves utilizing the bivariate K function:

$$\frac{e^{\frac{1}{2}\left[-(y-\mu_2)\left[\frac{(y-\mu_2)\,\sigma_{11}^2}{\sigma_{11}^2\,\sigma_{22}^2-\rho^2\,\sigma_{11}^2\,\sigma_{22}^2}-\frac{\rho(x-\mu_1)\,\sigma_{11}\,\sigma_{22}}{\sigma_{11}^2\,\sigma_{22}^2-\rho^2\,\sigma_{11}^2\,\sigma_{22}^2}\right]-(x-\mu_1)\left[-\frac{\rho(y-\mu_2)\,\sigma_{11}\,\sigma_{22}}{\sigma_{11}^2\,\sigma_{22}^2-\rho^2\,\sigma_{11}^2\,\sigma_{22}^2}+\frac{(x-\mu_1)\,\sigma_{22}^2}{\sigma_{11}^2\,\sigma_{22}^2-\rho^2\,\sigma_{11}^2\,\sigma_{22}^2}\right]\right]}}{2\pi\sqrt{\sigma_{11}^2\,\sigma_{22}^2-\rho^2\,\sigma_{11}^2\,\sigma_{22}^2}}$$

For instance, customer density at (2,2) position, given the parameters, $\mu_1 = -2$; $\mu_2 = -2.4$; $\sigma_{11}^2 = 2.5$, $\sigma_{22}^2 = 2.3$, $\rho = .938$, and $h = .2$ would be 0.0043. Thus, market share for S derived from customers at location (2,2) would be .1903 x .0043 = ~.01%.

Computations such as these could be performed for each of the x,y locations and the location that maximizes market share obtained. Another approach would be to expand equation 1 using Taylor series and then employ Newton search procedure to locate the optimal site (Press *et al.,*

1992). For the example given in Table 1, the ideal location for the new facility would be the "*" position in Figure 1. At this location, the new facility would capture approximately 29% market share. The share of competing facilities would be f1 = 18%, f2 = 9%, f3 = 35%, and f4 = 9%. Note that f3 is the market leader because it has the highest attraction rate and is located in a region that has the largest population density.

Figure 1: Contour Map Indicating the Ideal Location for the New Facility (*)
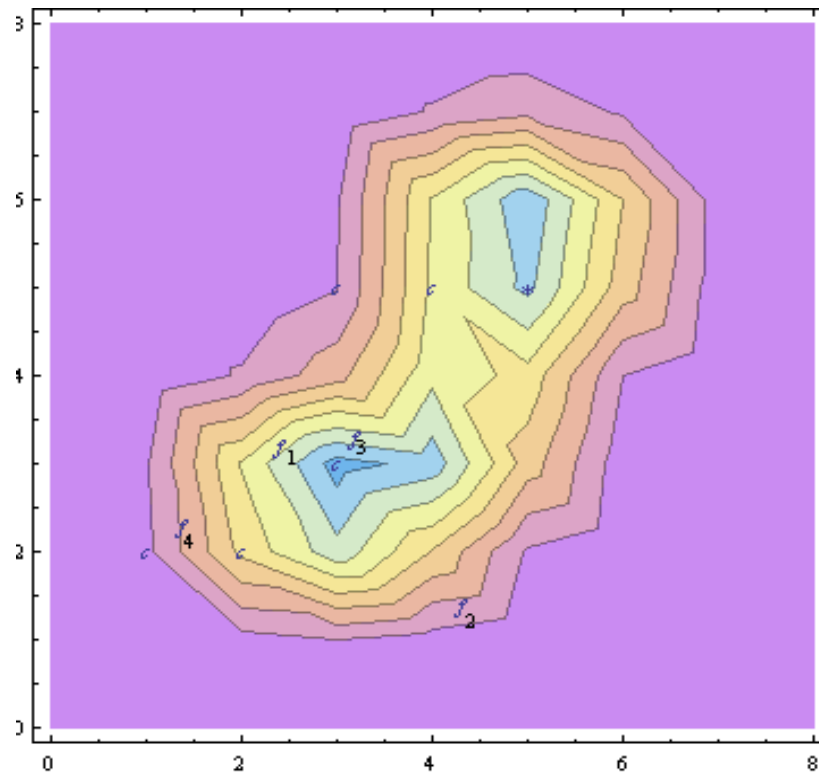
In summary, the model presented in equation 1 combines gravity models and density estimation procedures to address the question, "what fraction of a population would prefer each retail facility". In the next section, we reformulate this model to accommodate scenario planning. Specifically, we consider scenarios such as: (a) changes to customer numbers, (b) changes to competition, and (c) the likelihood that the new facility will meet objectives such as sales goals. In other words, from a business-systems perspective, we explore market structure, business conduct, and performance issues (Lusch & Laczniak, 1989).

Improvements to the Model

Population changes

In a university setting, student population tends to fluctuate during semesters and semester breaks. This requires utilizing different sets of f(x,y) to predict market share for a year or more. Specifically,

$$M(S) = \sum_{t=1,..T} \int\int g_s(x,y)\, f_t(x,y)\, dx\, dy \tag{4}$$

where, $f_t(x,y)$ denotes differing population density at t different time periods: during semesters, and semester breaks. Put another way, equation 4 ensures that the location of the new coffee shop is the ideal one given fluctuations in customer numbers.

Business objectives

More than three decades ago, Westwood, Lunn and Beazley (1974) highlighted the relevance of threshold concept to the study of consumer behavior: that is, consumers reject products that fall below threshold levels of expectations. Applied to the problem at hand, we contend that managers would reject business locations that would not achieve sales goals.

What would a general sales goal be? To address this question, we consider the first-mover advantage literature (Parry & Bass, 1990). Briefly, we rely on the reasoning that market share is correlated with the brand's (in our case firm's) order of entry (Lieberman & Montgomery, 1988). The theory is that for reasons such as customer loyalty, there is an enduring market share advantage that goes along with the firm's order of entry into the marketplace. The general, size-of-share ratio tends to be about 0.71 (Rossiter & Percy, 1998). For example, in a one-coffee-shop market, a new entrant will take 42% market share (.71 = (42/58)); in a two firms market, the market share of the third entrant would be 23%. We believe that this approach offers a reasonable guide to set sales objective for a new entrant. Of course, managers could substitute other goals such as breakeven sales. Finally, since firm-specific sales goals are set with industry market potential in mind, we assess the market potential for coffee shops and utilize this estimate to infer the probability that the new facility would attain its sales goal (equations 5 to 7).

To elaborate, consider equation 5. It transforms equation 4 from a deterministic form to a stochastic one by including $p(t)$ to represent market potential of facility S at time t. This results in:

$$M(S) = \sum_{t=1}^{T} \iint \frac{\frac{A_S}{d_S}}{\frac{A_S}{d_S} + \sum_{j=1}^{m} \frac{A_j}{d_j}} f(x,y) * p(t)\, dx\, dy. \tag{5}$$

Furthermore, if we assume $p(t)$ to be $N(m_{p(t)}, \sigma^2_{p(t)})$, then the mean market potential for facility S is

$$\mu_{M(S)} = \sum_{t=1}^{T} \iint \frac{\frac{A_S}{d_S}}{\frac{A_S}{d_S} + \sum_{j=1}^{m} \frac{A_j}{d_j}} f(x,y) * \mu_{p(t)} \, dx \, dy, \text{ and} \qquad (6)$$

its variance

$$\sigma^2_{M(S)} = \sum_{t=1}^{T} \iint \frac{\frac{A_S}{d_S}}{\frac{A_S}{d_S} + \sum_{j=1}^{m} \frac{A_j}{d_j}} (f(x,y))^2 \, \sigma_{p(ti)} \sigma_{p(tj)} r_{p(ti),p(tj)} \, dx \, dy, \qquad (7)$$

where, $r_{p(ti),p(tj)}$ refers to correlation between market potential in time periods ti, tj.

As mentioned earlier, the addition of $p(t)$ in equation 5 enables us to estimate the probability that the new facility would attain a certain sales goal. Specifically, the probability of realizing objective V (for example, $100,000 sales in year 1), is

$$\Phi[(V - \mu_{M(S)}) / \sigma_{M(S)}] \qquad (8)$$

where, $\Phi(z)$ denotes the standard normal distribution function with zero mean and variance one.

Competitive changes

Two variants are considered: (i) changes to attraction scores of competing facilities, and (ii) new entry / exits. The expectancy-value conceptualization in marketing (cf., Sheth & Mittal, 2004) contends that consumers' attitude about a product will precede changes in behavior towards the product. Since attraction or attitude towards a retail facility determines patronage, we consider the impact of changes in competing facilities attractiveness on new facility's M(S) (equation 6). Similarly, we consider changes to M(S) given changes to market structure caused by a new firm entry. Lilien and Yoon (1990) contend that later entries that were significantly differentiated from existing firms could gain substantial shares or even oust the first entrant from its dominant position.

Finally, since occurrence of these scenarios is uncertain, we minimize the maximum loss of the location decision. This analysis is based on a loss matrix such as the one given in Table 2. Again, for illustration purposes, we utilize the hypothetical data given in Table 1, and assume that M(S) in the locations given in Table 2 meets the new firm's sales goal.

Table 2: Loss Matrix: Application of MiniMax Decision Criteria		
Scenario	Location that would Maximize M(S)	Max. Regret for Scenario (%)
Little or no market turbulence; optimum location is based on equation 6	xy = 5,5; µM(S) = 29%	17.4%
Competitor f1 increases its attraction score to 5	xy= 4,5; µM(S) = 26%	16%
Competitor f3 loses attraction to 3	xy= 5,5; µM(S) = 30%	28%
A new competitor enters the market with an attraction score of 4 and locates at its optimal location (5,6)	xy = 5,5; µM(S) = 21%	15%
Competitors f2 and f4 exit the industry	xy = 5,5; µM(S) = 33%	19%

As mentioned earlier, if our objective is to minimize the maximum loss, we will locate the new business in (5,5) and secure 21% market share. Formally, for i scenarios, we minimize the maximum regret value for S at location xy (equation 9)

$$\text{Min } \{\max_i[M_i(S_{max}) - M_i(S)]\} \qquad (9)$$

where, $M_i(S_{max})$ denotes maximum market share for scenario i at location S_{max} and $M_i(S)$ indicates market share at point S.

METHODOLOGY

Secondary Data: Customer Density ($f_t(x,y)$)

The geographical setting of the study was a mid-size university campus in Australia. As at December 2005, the campus had a population of 13,779 students, and 2,473 academic and professional staff. The university operates on a two-semester basis from February to May and August to early December. This suggests that there could be four different population densities in a year with lot more students and staff present during the semesters (Table 3). The campus population centers are: (i) the western region that includes the faculty of arts, (ii) the central section where the business school is located, (iii) the eastern sector that contains the engineering school, (iv) the northern area with the medical school, and (v) the southern section that houses the science departments (Figure 2).

Figure 2: The Geographical Area of the Study
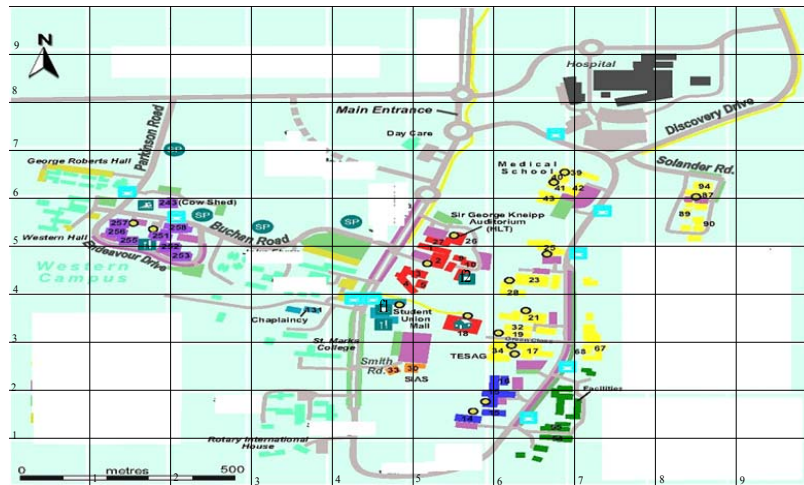
Primary Data: Attraction of Facility (g(x,y)), and Measures to Estimate Sales Potential p(t)

The campus had two existing coffee shops or competing facilities (f1, and f2 in Figure 2). To gauge the attraction of the facilities, including the planned, new one, an email survey was implemented among a random sample of staff and students on campus. As shown in Table 3, the campus population was divided into 20 clusters, and sample units were drawn from each of the clusters. Initially, the sample was set at 5% of the population or ~816 respondents. However, since response rate for email surveys seldom exceed 75% (Couper, 2000), the sample size was set at (816/.75) = ~1090.

Table 3: Population Data as at December 2005					
Region / Department	Coordinates in Figure 2 (xy axes)	Time 1 (February - May)	Time 2 (June - July)	Time 3 (August - November)	Time 4 (December - January)
Eastern Region					
Biological Sciences	6.6, 4.3	596	242	633	158
Molecular Sciences	6.5, 3.5	1625	392	1750	321
Earth Sciences/Math/Physics	6.6, 2.8	2510	287	2625	258

Region / Department	Coordinates in Figure 2 (xy axes)	Time 1 (February - May)	Time 2 (June - July)	Time 3 (August - November)	Time 4 (December - January)
Table 3: Population Data as at December 2005					
Nursing Sciences	6.8, 4.9	1112	235	1212	217
Tropical Environment	6.6, 4.3	598	80	638	80
Western Region					
Australian Studies	5.01, 2.5	450	23	460	22
Northern Campus					
School of Medicine	7.01, 6.5	604	136	641	111
Pharmacy	8.6, 6.2	381	101	414	84
Biomedical Sciences	8.6, 6.01	375	55	402	55
Tropical Medicine	8.5, 5.2	369	45	392	45
Southern Area					
Civil Engineering	5.8, 1.4	115	66	137	55
Environmental	6.01, 1.6	116	80	139	63
Electrical	6.01, 2.01	127	115	162	93
Computer	6.1, 2.1	106	28	118	27
Mechanical	6.2, 2.1	130	121	167	98
Other Engineering	6.2, 2.3	95	5	98	5
Central Region					
School of Education	5.2, 4.3	1101	97	1127	75
School of Law & Business	5.3, 5.01	2375	127	2423	112
Music	5.8, 4.8	754	34	769	32
Arts & Social Sciences	4.9, 4.2	2713	124	2763	112

A probability-proportional-to-size procedure was employed to select the respondents. Specifically, during March 2006, questionnaires were emailed to 400 respondents in the Eastern region, 75 in the Western region, 110 at the Northern campus, 85 at the Southern region, and 420 respondents in the Central area of the campus.

The questionnaire requested respondents to state, (i) the number of times they have been to campus coffee shops during the last four weeks, (ii) average expenditure per visit, and (iii) opinions about building an "up-market" coffee shop on campus. Information such as the demographics of the respondents was also obtained.

The following semantic differentials were used to measure consumer attitude towards building a new up-market coffee shop on campus:

Important	Unimportant	Boring	Interesting
Of no concern	Of concern to me	Unexciting	Exciting
Irrelevant	Relevant	Appealing	Unappealing
Means a lot to me	Means nothing to me	Mundane	Fascinating
Valuable	Worthless	Essential	Nonessential
Beneficial	Not beneficial	Undesirable	Desirable
Matters to me	Doesn't matter	Wanted	Unwanted
Uninterested	Interested	Needed	Not needed
Fun	Not fun	Risky	Not risky

The respondents also specified on 5-point scales the agreement or disagreement that the existing coffee shops possessed the following attributes:

Convenience	Friendly personnel
Price	Cleanliness
Variety of menu	Taste of food
Speed of service	Popularity with students

The questions about frequency of visits and expenditure enable us to estimate the market potential of coffee shops as a product of average "number of visits" per month, and "average expenditure per visit" (equation 10). Since the number of months during semesters and semester breaks differs, we used appropriate adjustments to compute market potential. For instance, during the semesters, we weighted *p(t)* by a factor of 4 to account for the number of months or duration of the semester. Semester breaks were given a weight of 2.

$$\mu_{p(t)} = \sum_{i=1,..,20} e_i \, v_i \, N_i(t) \tag{10}$$

where, $\mu_{p(t)}$ = Average market potential at time t (t=1 to 4);

     e_i = average expenditure per visit for market area i;

     v_i = average number of visits to coffee shops in a 4-week time period for market area i, and

     $N_i(t)$ = Number of customers in market area i at time t

     The attractions of the facilities were deduced from measure reliability. Following Lord and Novick (1968), we define measure reliability as the squared correlation between observed measure and true measure. Thus, if attitude towards the new coffee shop exhibited a reliability of .90, we took $(.90)^{1/2}$ = .95 to represent the true score of the measure. In other words, the square-root of reliability of the semantic differential items for the new facility, and the square-root of reliability of the sum of the attribute scores for each of the existing facility, were employed as attraction scores.

     Another prescription of measurement theory is that multi-item measures should be validated using external criterion (Kline, 2000). We implement this recommendation by correlating attitude measures with two single-item measures: (i) the adequacy of coffee shops on campus, and (ii) overall satisfaction with existing facilities f1, f2. Specifically, respondents were asked to state whether the number of coffee shops on campus be increased, decreased, or remain the same. We use this as an external criterion to validate the "attitude towards new coffee shop" measure. Respondents also expressed their overall satisfaction with the two existing coffee shops on a 5-point "very dissatisfied", "very satisfied" scale. This measure is used as the external criterion to validate attitude towards existing coffee shops.

Table 4: Test for Equality of Means: First-Wave Respondents (n=235) versus Non-Respondents (n=37)			
	Mean Scores		
Group	Att. towards New Facility (18-item semantic differential)	Att. towards existing facility f1 (seven item 5-point scale)	Att. towards existing facility f2 (seven item 5-point scale)
First-wave respondents (n=235)	57	30	27
Non-respondents (n=37)	64	23	24
Mean difference	-7	7	3
95% CI	-23 to 9	-4 to 17	-7 to 13

RESULTS AND DISCUSSION

     The email survey resulted in a 22% response rate (n=235). The respondents were predominantly female (60%), and were less than 25 years of age (54%). To check for non-response bias, a random sample of 100 non-respondents were contacted *via* email and requested to complete

the questionnaire. Thirty seven responded. Table 5 compares these 37 responses to the original 235 responses on salient variables such as attitude towards the new coffee shop. The hypothesis that response differences exist in the two responding segments was rejected since the 95% confidence intervals for mean differences spanned "0" (Table 4). In summary, the study exhibits little or no non-response bias. In the following pages, we pool the responses from these two groups and estimate model parameters using a total of 272 observations.

Measures

Psychometric properties of the attitude / attraction measures

Table 5 shows the reliability and validity estimates for the three multi-item measures: respondents' attitude towards the new coffee shop, and attitude towards the existing facilities f1 and f2. Validity estimates are in line with expectations. For instance, attitude towards the new coffee shop correlates with consumer perceptions that "coffee shop numbers should be increased" (r=.18; p=.005). A similar pattern emerges for "attitude towards existing facilities f1 and f2": they correlate with consumer perceptions of "satisfaction with existing coffee shops" and are uncorrelated with "adequacy of coffee shops" measure. The "true" attraction scores for the facilities range from a low .92 for f1 to a high of .96 for the new facility.

Table 5: Measure Reliability, Validity, and Attraction Scores (n=272)				
Measure: Attitude towards …	Reliability (Internal Consistency)	$\sqrt{Relaibility}$ (Attraction Scores)	Adequacy of Coffee Shops(r_{xy})	Satisfaction with Existing Facilities (r_{xy})
New coffee shop	.93	.96	.18 (p=.005)	-.11 (p=.25)
Facility f1	.86	.92	.14 (p=.25)	.32 (p=.04)
Facility f2	.87	.93	.05 (p=.66)	.48 (p=.00)

Distance and market potential measures

Distance between the facilities and customer locations were determined using Figure 3 and Table 3. From Figure 3, the x,y coordinates of f1 were determined to be 5.8, and 4.2. The coordinates for f2 were 4.9, and 3.9. The Euclidean distances between facilities and customers were computed using data given in Table 3, Column 2. As regards market potential (equation 10), responses to the questionnaire suggest that: (i) the mean number of visits to coffee shop per month is 4, (ii) the average amount spent by a customer, per visit is $5.5, and (iii) one-fourth of the campus

population patronized coffee shops. Based on these parameters, total market potential per year is estimated to be in the interval $783, 405 \pm 3(114, 403)$ (Table 6).

Table 6: Coffee Shop Market Potential per Time period: Point Estimates	
Time period 1 (February - May)	$357, 354
Time period 2 (June - July)	$26, 222
Time period 3 (August - November)	$377, 879
Time period 4 (December - January)	$22, 400
Total market potential	$783, 856

Location Analyses

(i)   Scenario: *Ceteris Paribus* status: Little or no turbulence in the marketplace and the new firm "*s*" location decision is based on model results

Calibrating equation 6 suggests that the ideal location for the "new" coffee shop is (5,5). At this location the new coffee shop will gain 40% market share or generate $312, 572 in annual revenue. The existing facility f2 will gain 32% market share (Figure 3).

Figure 3: Ideal Location for the New Facility: New
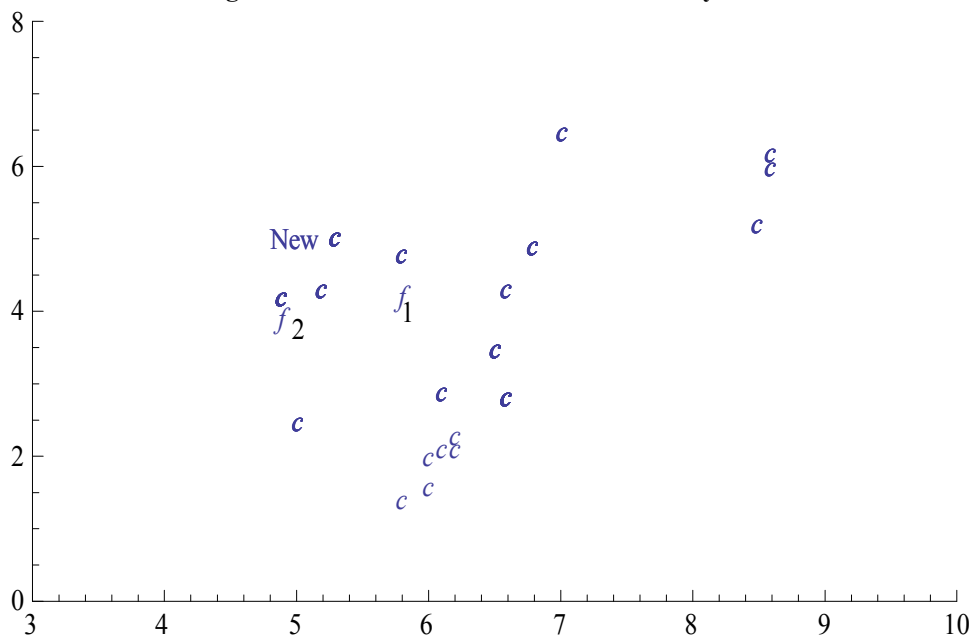
How does this amount relate to the new facility's sales objective? Earlier, the sales objective for a new entry in a two-firm market was highlighted to be 23 market-share points (see the "business objectives" discussion in the Methods Section). Based on $m_{p(t)}$ = $312, 736, and $\sigma^2_{p(t)}$ = $76, 101 (computations based on survey data aggregated at the customer-segment level), the probability that the new facility would achieve its sales objective works out to 0.96.

(ii)   Scenario: Existing facility f1's attraction decreases to the 0.5 level

In this situation, the ideal location for the new facility (*s*) would be (4, 5). At this point, the new facility would gain 43% market share. Compared to the *ceteris paribus* scenario, market share for existig facility f1 will decrease by 8 points to 20%, and facility f2 will hold a 37% market share. Expressed in monetary terms, the new firm's 43% market share translate into $338,498. The probability that the new firm will achieve its sales objective works out to an almost perfect .97.

(iii)   Scenario: Existing coffee shop f2 exits the market place and the attraction of f1 reduces to 0.2

Under these conditions, the optimal location for the new facility on the x,y geographical plane is 5.05, and 4.83. This location would provide the new coffee shop with a whopping 84% market share or generate $655, 607 in sales.

(iv)   Scenario: Another firm, f3, enters the market and locates itself in the ideal 4,5 location.

This is an extension to the *ceteris paribus* scenario; the new firm *S* locates on the ideal (5,5) position and within the first year, another business f3 enters the market place and occupies its ideal, the (4, 5) position in the geographical plane. The entry of f3 would split the market share among the businesses as follows: new facility (*s*) would hold 26% market share, f1 will secure 23%, f2 will claim 25%, and f3 would gain 26% market share.

In spite of this erosion in *S*'s market share, from 40% under the *ceteris paribus* scenario to 26% now, it still has a two-third chance of achieving its 23% sales objective. Table 7 summarizes the new firm location, and market share arising from each of the four scenarios. Finally, if we employ the differences between the payoffs (market shares) of the most favorable outcome for scenario *i* and the other payoffs associated with *i* to determine location decision, then the (4, 6) position would amount to minimizing the maximum loss for the new firm (Table 8).

Table 7: New Firm (s) Locations and Market Shares under Various Scenarios			
Scenario	Location Coordinates	Market Share	Prob. of Achieving Sales Objective
Ceteris Paribus	(5, 5)	40%	0.96
Existing firm f1's attraction reduces from 0.92 to 0.5	(4, 5)	43%	0.97
Existing firm f2 exits and f1's attraction falls to 0.2	(5.05, 4.83)	84%	0.99
Another firm, f3, enters the market with 0.9 attraction	(4,6)	26%	0.67

Table 8: Application of the Minimax Decision Criterion				
Scenario	Location Coordinates	Sales Revenue in Location ($)	Worst Sales Outcome ($)	Maximum Regret ($)
Ceteris Paribus	(5, 5)	312, 572	152, 951	159, 621
Existing firm f1's attraction reduces from 0.92 to 0.5	(4, 5)	338, 498	182, 088	156, 409
Existing firm f2 exits and f1's attraction falls to 0.2	(5.05, 4.83)	655, 607	502, 537	153, 070
Another firm, f3, enters the market	(4,6)	201, 652	104, 625	97, 026

SUMMARY AND CONCLUSION

This exercise was prompted by a need to assist managers in location decision making in situations where geo-spatial information about individual customers are lacking and therefore, off-the-shelf software could not be used to glean insights into location decisions. Based on the notion that demographics are poor predictors of behavior, we modeled attraction or attitude towards the new and existing facilities as the salient determinant of patronage. A modified gravity model with scenario planning capabilities was developed. The model was implemented at a medium-size university in Australia to locate a new coffee shop on campus. A questionnaire survey among students and staff at the university provided data for model estimation and validation.   Results suggest that locating the new facility in x,y=4,6 position (see Table 8) would minimize the maximum loss that the facility could suffer due to happenings such as changes to market structure.

At least two questions need to be addressed to make this model useful for practitioners: (i) is there a software that could help in estimating model parameters, and (ii) how does the model results compare to a simple naïve model or judgment based decision making? Software for implementing the model can be obtained by writing to the author. As regards the model's predictive capability, in the opening vignette we learnt that the facility planners at the university want to locate the new coffee shop at the medical school precinct (see Table 3). At this location, the new coffee shop would gain 28% market share (sales revenue would be approximately $216,307). On the other hand, our model based solution suggests that locating in the (5,5) position would result in the new firm securing a 40% market share or $312,572 in sales revenue (difference statistically significant at $p < .05$ level).

In conclusion, this paper offers managers theory and algorithms to address location problems. A survey among customers is required to calibrate the model but we believe that it is a small investment to gain the benefits of better decision making.

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APPLICANT PERCEPTIONS OF THE GENDER EFFECT ON THE SELLING PROCESS AND ON TARGETING PROSPECTIVE CUSTOMERS: DOES GENDER MATTER?

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ABSTRACT

This manuscript examines applicant perceptions of the gender effect on the selling process and on targeting efforts. Specifically, the study investigates whether there is a gender effect during each stage of the selling process and targeting efforts for prospects. Based on a random sample of 385 business students from several American universities, the findings suggest that students generally feel they will be more successful with female buyers during the selling process and prefer to target women as potential buyers. The study found no consistent gender effect pattern for male students compared to female students; rather results seem to vary for each step of the selling process and for each aspect of targeting customers. The paper also presents managerial implications of the findings.

INTRODUCTION

In recent years, as more women have joined the sales force, women have proven to be as successful as men in the traditionally male-dominated field of selling; yet they still face some barriers in gaining entry to some selling jobs (Fugate et al., 1988; "Pink Ghetto in Sales," 1988). Some barriers are caused by sales managers' beliefs in gender stereotypes (Kanuk, 1978). Several prior studies (Comer and Jolson, 1991; Russ and McNeily, 1988; Swan and Futrell, 1978; Swan, Rink, Kiser and Martin, 1984) of women in sales suggest that stereotypes of women in selling still exist from both managers and potential customers. A study by Comer and Jolson (1991) showed that, according to sales managers' perceptions, the more a saleswoman's behavior resembles the negative gender stereotype, the less effective her selling performance. The current study examines two fundamental issues: (1) whether negative (or positive) gender stereotypes are predictors of, or even associated with, selling performance, and (2) whether gender similarity/dissimilarity between salespersons and potential buyers impacts sales efforts during the selling process and in targeting

efforts in finding new customers. These issues have apparently not been addressed by prior research. The current study could have important managerial implications for recruiting and developing effective sales force training programs and strategies.

Prior literature concerning gender effects in the sales field have focused on two main areas: one area of research has examined the effect of gender on interview processes and recruiting outcomes; and another area of research examined the impact of buyer-seller gender on sales performance. Several studies have investigated gender bias during the employment interview and attempted to separate the effects of applicant gender and recruiter gender on recruiters' evaluations (Arvey and Faley, 1988; Powell, 1987). These prior studies produced mixed results concerning the effect of the similarity of applicant gender and recruiter gender on interview outcomes. For example, a study by Graves and Powell (1988) found that applicant gender had no significant effect on the interview outcome; while the results of another study by Graves and Powell (1995) showed that female recruiters saw male applicants as more similar to themselves and more qualified than female applicants.

Other research that examined the gender effect in selling has covered such issues as female managers' leadership style (Comer et al., 1995; Yammarino et al., 1997); sex-role identity (Jolson and Comer, 1992); stereotypical behavior and perceptions of gender stereotyping (Comer and Jolson, 1991; Russ and McNeilly, 1988); and professional status (Gable and Reed, 1987). Concerning the gender effect on sales performance, past studies (Crosby, Evan, and Cowles, 1990; Smith, 1998) suggest that gender similarity between sales persons and customers is positively related to the quality of the sales person/customer relationship and sales performance. Crosby et al. (1990) found that same-gender relationships seem to be associated with greater relationship investment, more open communication, and greater trust and satisfaction within relationships. These findings support conventional wisdom that exchange relationships are easier to develop with similar others (Churchill et al., 1997). An earlier study by Churchill et al., (1975) found a significant relationship between visible similarity (i.e., gender, race, age, and nationality) and sales performance. However, other studies (Crosby et al., 1990; Weitz, 1981) suggest that the relationship that exists between dyadic similarity and salesperson performance is weak at best.

An empirical study by Dwyer, Orlando, Shephard (1998) showed that female salespeople were just as effective as male salespeople, and gender similarity was not a significant factor in sales performance. In addition, their study found that male-female and female-male mismatched dyads significantly outperformed gender-matched dyads. In fact, their results showed that women selling to men (a mismatch) performed higher than the matching female-female dyads, and also exceeded the performance of male-male and male-female dyads. In addressing the question of "Does difference matter," Jones, Moore, Stanaland and Wyatt (1998) found that consumers appear to be more accepting of salespeople who are "dissimilar" to themselves, which contradicts some assertions in the popular press (Lucas 1996). They concluded that "difference" made no difference.

The literature concerning the gender effect on sales performance provides mixed results. As some studies (Churchill et al., 1997, 1975; Crosby et al., 1990; Smith, 1998) suggest benefits of matching buyer–seller genders, others studies (Dwyer et al., 1998; Jones et al., 1998) contradict these benefits. This study is aimed at investigating applicant perceptions (business students) regarding gender effects on different stages of the selling process and selling efforts. Unlike prior studies in the selling field where the focus was on the gender effect on recruiting processes and/or sales performance, this paper examines the gender effect at each step of the selling process as well as the gender effect on targeting of potential buyers. This study has two sets of specific objectives. One set of objectives deals with whether applicants perceive that they will: (a) confidently introduce themselves to male versus female buyers; (b) make presentations to male versus female buyers; (c) answer questions effectively from male versus female buyers; (d) overcome objections from male versus female buyers, and (e) engage in a trial close and successfully close the sale with male versus female buyers. The second set of objectives deal with whether the applicant: (a) would more strongly target male versus female potential buyers; (b) would be more successful selling to male versus female buyers, (c) would more strongly prefer selling to males versus females; and (d) would prefer to focus more of their efforts on males versus females when finding new buyers.

Selling is a process with successive stages, which includes meeting the prospect, making a presentation, answering questions, overcoming objections, attempting a trial close, and closing the sale (Futrell, 2006; Manning and Reece, 1995). Understanding the gender effect on each stage of selling process could provide insight into the nature of gender effects in the sales field. Also, before the actual selling process, it would be beneficial to understand the gender effect on targeting and selling efforts of salespeople when they are selecting potential buyers. In order to examine applicant perceptions of gender effects on the various stages of the selling process and targeting efforts, comparisons will be made for: all respondents, for male respondents, for female respondents, and for male versus female respondents. This paper is important because it appears to be the first paper to address gender effects on selling and targeting from the applicant's point of view. Understanding applicants' perceptions of these issues could assist sales organizations in recruiting for sales positions and in training the sales force.

THEORETICAL BACKGROUND AND RESEARCH HYPOTHESES

Several theories or paradigms that have been developed or proposed to explain the gender effect on sales performance. These theories or paradigms, which have served as a foundation for empirical gender studies in the selling field, are Social Identity Theory (Tajfel, 1982; Tajfel and Turner, 1986); Self-Categorization Theory (Turner, 1982, 1985); and the Similarity-Attraction Paradigm (Byrne, 1971; Byrne and Neuman, 1992; Graves and Powell, 1995). The similarity-attraction paradigm (Byrne, 1971; Byrne and Neuman, 1992; Graves and Powell, 1995) suggests that individuals tend to be attracted to, or seek membership with, those (demographically) similar to

themselves, leading to perceived attraction. Similarity is the degree to which members of a group are alike in terms of personal (or demographic) characteristics or other attributes (Byrne and Neuman, 1992; Smith, 1998). Thus, similarity constitutes an important basis of interpersonal attraction and of social integration and cohesion (Baron and Pfeffer, 1994). Byrne and Neuman (1992) state that gender similarity seems to have a very strong influence on perceived similarity and interpersonal attraction. This theory implies that there would be a perceived attraction between a salesperson and a buyer, based on perceived similarity.

Social identity theory (Tajfel, 1982; Tajfel and Turner, 1986) advocates that belonging to a group creates a psychological state that confers social identity or a collective representation of self-identity and behavior. Under this theory, an individual's self-identity formation is partly a function of group membership and demographic similarity will have positive effects on performance by increasing interpersonal attraction and increasing cognitive biases. Tajfel (1982) states that based on social identity theory an individual's self-identity formation is partly a function of group membership. People in groups share experiences and attitudes, they like each other and understanding increases, and this interaction reinforces or ratifies one's own self image (McNeilly and Russ, 2000). In essence, social identity theory predicts that demographic similarity will have positive effects on performance by increasing interpersonal attraction and increasing cognitive biases (Linville and Jones 1980), which could lead to more open communication and decreased interpersonal tension. Social identity theory also provides some insight for the unexpected outcomes of some previous gender studies (Graves and Powell, 1995; Hardin et al., 2002).

An important and integral aspect of social identity theory involves self-categorization. Self-categorization theory (Turner, 1982, 1985) suggests that individuals take socially defined categories into account when making evaluations about others, where those characteristics that are similar to self would likely be considered as positive and vice-versa. McNeilly and Russ (2000) point out that since demographic characteristics such as age and gender are observable and accessible, they are useful for self-categorization. This aspect of self-categorization theory indicates that social categories such as gender, age, and race (Messick and Mackie, 1989), can cause one to perceive oneself as similar to other members of a category or group and can trigger stereotyping of the out-group. Self-categorization also takes place during the formation of dyadic relationships (Benkhoff, 1997), where similarity facilitates communication, the development of greater trust, and satisfaction within relationships (Kanter, 1977; Smith, 1998).

These theories suggest that individuals maintain a positive self-identity by seeking to maximize inter-group distinctiveness and perceive out-group members as being less attractive (Jackson et al., 1992; Kramer, 1991). The implication of these theories is that salespeople will feel more confident during sales presentations and will primarily target prospects that are similar to themselves (i.e., same gender). Based on the above theories, Figure 1 presents a framework to investigate the potential effects of applicant gender (as a future salesperson) and buyer gender on each step of selling process and on targeting efforts. According to the Similarity-Attraction

Paradigm (Byrne, 1971; Byrne and Neuman, 1992; Graves and Powell, 1995), Social Identity Theory (Tajfel, 1982; Tajfel and Turner, 1986), and Self-Categorization Theory (Turner, 1982, 1985), there should be a gender effect (or bias) on each selling step and on targeting (prospecting) efforts. These theories suggest that applicants, as potential salespeople, would perceive that they would be more successful at each step of the selling process (introducing themselves, giving presentations, answering questions, overcoming objections, engaging in a trial closing, and successfully closing the sale) with same gender buyers (gender matched buyer-seller) than with different gender buyers (gender mismatched buyer-seller). Based on these relationships, presented in Figure 1, and the first set of study objectives stated above, the following hypotheses are developed for each step of selling process:

H1: *There will be a gender effect where (H1a) male applicants perceive they will more confidently introduce themselves to male buyers, and (H1b) female applicants perceive they will more confidently introduce themselves to female buyer.*

H2: *There will be a gender effect where (H2a) male applicants perceive they will more confidently make presentations to male buyers, and (H2b) female applicants perceive they will more confidently make presentations to female buyers.*

H3: *There will be a gender effect where (H3a) male applicants perceive they will be more confident in answering questions from male buyers, and (H3b) female applicants perceive they will be more confident in answering questions from female buyers.*

H4: *There will be a gender effect where (H4a) male applicants perceive they will be more confident in overcoming objections for not buying from male buyers, and (H4b) female applicants perceive they will be more confident in overcoming objections for not buying from female buyers.*

H5: *There will be a gender effect where (H5a) male applicants perceive they will be more confident in attempting a trial close with male buyers, and (H5b) female applicants perceive they will be more confident in attempting a trial close with female buyers.*

H6: *There will be a gender effect where (H6a) male applicants perceive they will be more successful in closing the sale with male buyers, and (H6b) female*

applicants perceive they will be more successful in closing the sale with female buyers.

Figure 1: Effect of Salesperson and Buyer Gender on Selling Process and Targeting Efforts				
		Applicant/Salesperson		
		Male	Female	
Potential Buyer	Male	Gender Match: Perceived Similarity	Gender Mismatch: Perceived Dissimilarity	
	Felame	Gender Mismatch: Perceived Dissimilarity	Gender Match: Perceived Similarity	
		Steps in Selling Process		
		Introducing		
		Presentation		
		Answering questions		
		Overcoming objections		
		Attempting trial close		
		Closing the sale		
		Targeting effort		
		Attempting to sell		
		More successful in selling		
		Prefer to sell to		
		Prefer to focus efforts on		

Similarly, based on the relationships presented in Figure 1 and the second set of study objectives, the following hypotheses are developed for targeting prospective buyers and selling efforts:

H7:   *There will be a gender effect where (H7a) male applicants perceive they will more strongly attempt to sell to male buyers, and (H7b) female applicants perceive they will more strongly attempt to sell to female buyers.*

H8:   *There will be a gender effect where (H8a) male applicants perceive they will be more successful in selling to male buyers, and (H8b) female applicants perceive they will be more successful in selling to female buyers.*

H9:   There will be a gender effect where (H9a) male applicants perceive they will prefer selling to male buyers, and (H9b) female applicants perceive they will prefer selling to female buyers.

H10:   There will be a gender effect where (H10a) male applicants perceive they will prefer to focus their efforts on male buyers, and (H10b) female applicants perceive they will prefer to focus their efforts on female buyers.

METHODOLOGY

In order to accomplish the study objectives, a research instrument (questionnaire) was developed, which was adapted from Hardin et al. (2002) and further modified and improved to meet the objectives of this study. Specifically, the survey instrument included a number of questions concerning both sets of study objectives to examine student (as potential salespeople) perceptions of the gender effect during the selling process and targeting and selling efforts. For the first set of objectives, students were told that the selling process consisted of several steps. They were instructed to assume that they were giving a sales presentation and were asked several questions concerning their perceptions of how successful they thought they would be in dealing with male versus female potential buyers in each step of the selling process. For the second set of objectives, the instrument asked students whether they would more likely target to sell to, and be more successful in selling to, male versus female buyers, and finally, they were asked to indicate their preference for selling to, and focusing their efforts on, prospecting for male versus female buyers.

The research instrument included scale statements covering both sets of the study objectives. The instrument was submitted to several academicians with significant experience in the sales field and in scale development. After the instrument was improved with their suggestions, it was pre-tested with several students. The pretest provided very useful input for improving and clarifying the wording of the questions and establishing the face validity of the constructs (Churchill, 1979; Churchill and Iacobucci, 2005; Narver and Slater, 1990). The questions were measured on a semantic differential type of scale ranging from -5 to 5, where a score of -5=definitely males, a score of 0=equally likely, and a score of 5=definitely females. This scale offered some benefits. One benefit was that there was one scale item for each objective to cover both males and females. This reduced the number of scale items and made the instrument shorter. The second benefit is that each item somewhat forced the respondents to indicate their perceptions of the gender effect in a clear way. On the actual research instrument, the negative signs were omitted in order to eliminate any potential confusion and/or association with negative numbers. The instrument also included several demographic variables, such as gender, age, year in school (class) and major.

The above described instrument was administered to business students in the colleges of business at five universities in the United States; three were state universities while the other two were private universities. Before conducting the study, marketing professors at several U.S. universities were contacted and asked if they would be interested in participating in the study by administering the instrument in their classes. The professors who agreed to participate in the study were asked to randomly select two of their classes and administer the instrument to all the students in those classes. Special effort was made to select general business classes so that the study would include students with different majors as well as different classification levels. These classes were considered as clusters, and every student in each selected class completed the instrument. This type of sampling is called one-stage cluster sampling (Churchill and Iacobucci, 2005). This process produced 385 useable responses. The five universities, located in various parts of the United States, should offer a fairly good representation of business students across the United States. Since business (especially marketing) students are more likely to seek sales jobs, the responses from these students should provide useful information to help accomplish the research objectives of this study.

Respondent Profiles

The demographic profiles of the respondents show that 51.4% of the respondents are male and 48.6% are female, with an average age of 23.7 years. A distribution of student classification indicates that 1.0% are freshmen, 5.5% are sophomores, 28.2% are juniors, 39.9% are seniors, 24.3% are graduate students, and 1.0% are other. In terms of majors, 27.9% are majoring in marketing, 24.8% in management, 13.1% in accounting, 11.0% in finance, 1.6% in economics, 1.0% in computer science, 1.8% in management information systems, and 18.2% in other. While the survey was intended to include students from different business majors by targeting general business courses, the distribution of majors shows that marketing and management majors are the largest groups of respondents followed by accounting. These majors seem to be the most popular majors at many U.S. business schools.

RESULTS

The main objective of this study was to investigate applicant perceptions of the gender effect on selling performance during each step/stage of the selling process and targeting efforts for prospective buyers. In order to test whether there is a gender effect during any of the selling stages, a one sample t-test was conducted where the test value = 0. Separate analyses were conducted for all students, male students and female students, and the results are presented in Table 1. Since the scale used in the study ranged from "-5=definitely males" to "5=definitely females" with "0=equally likely," the sign of the mean shows the direction of any gender effect, and the t-significance would indicate if the gender effect was significant. Based on the results of the one sample test for all

responses, students perceive that they would be more successful in making presentations to female buyers (mean of .41, p < .01), and answering questions from female buyers (mean of .30, p < .01). They also feel they would be somewhat more successful in overcoming objections from female buyers (mean of .19, p < .10). The results also indicate that students feel they would be equally successful with male and female buyers in introducing themselves, engaging in a trial close, and in closing the sale. The results suggest the existence of a perceived gender effect (bias) during some stages of selling process where students feel they would be more successful with female buyers than male buyers.

Table 1: Students' Perceptions of Gender Effect in Selling Process and Targeting Potential Customers									
Selling Process	All respondents			Male respondents			Female respondents		
	Mean	St. Dev.	p value	Mean	St. Dev.	p value	Mean	St. Dev.	p value
Confidently introducing self to potential buyers	-0.1	2.11	0.679	-0.11	2.04	0.44	0.01	2.18	0.946
Making the sales presentation	0.41	2	0	0.09	1.82	0.504	0.77	2.11	0
Answering any questions the client might have	0.3	1.79	0	-0.04	1.76	0.776	0.68	1.75	0
Overcoming various objections to buying	0.19	1.98	0.07	0.26	1.95	0.06	0.13	2.01	0.398
Engaging in a trial closing	0	1.97	0.834	0.13	2.01	0.354	-0.16	1.9	0.244
Successfully closing the sale	0.02	2.03	0.859	0.09	2.06	0.55	-0.07	2	0.658
Targeting Potential Customers	Mean	St. Dev.	p value	Mean	St. Dev.	p value	Mean	St. Dev.	p value
If hired as a salesperson, most strongly attempt to sell to men or women	0.43	2.15	0	0.61	1.3	0	0.23	2.3	0.182
As a sales person, most successful selling to men or women	0.37	2.59	0	0.72	2.41	0	-0.03	2.71	0.971
If you had a choice, you would most strongly prefer selling to?	0.34	2.55	0.01	0.81	2.52	0	-0.13	2.48	0.461
When finding new buyers, you would prefer to focus most of your efforts on males vs. females, assuming an equal number of buyers are available?	0.34	2.02	0	0.49	2.07	0	0.17	1.94	0.244
Scale: Definitely Males -5 -4 -3 -2 -1 0 1 2 3 4 5 Definitely Females									

The mean scores of selling efforts in Table 1 show that students, if hired as sales persons, would prefer to attempt to sell to female buyers (mean of .43, p < .01) and believe they would be

more successful selling to female buyers (mean of .37, p < .01). These findings suggest the existence of a gender effect in targeting and selling to female buyers. In terms of targeting, the respondents indicated they would prefer selling to female buyers (mean of .34, p < .01). Also, when finding new buyers, the respondents would prefer to focus their efforts on female buyers (mean of .34, p < .01), assuming an equal number of male and female buyers are available. These findings further support the existence of a significant gender effect in favor of female buyers concerning the selling efforts/outcome of potential applicants.

In addition to a gender effect for all students (potential salespeople), separate analyses were conducted to examine whether there were gender effects for male students and female students, and the results are presented in Table 1. The results for male students indicate that the mean scores are not significant for any of the selling steps. These findings suggest that male students feel they will be equally successful in their selling efforts during each step of the selling process to both male and female buyers. These results do not support hypotheses H1a, H2a, H3a, H4a, H5a, and H6a. In Table 1, similar analyses for female students shows that females seem to feel they would be more successful in making presentations to female buyers (mean of .77, p < .01) and answering questions from female buyers (mean of .68, p < .01). Since the mean scores for the other selling steps are not significant, these results suggest that female students feel equally successful in their selling efforts during the overall selling process to both male and female buyers. Concerning female applicants, hypotheses H2b and H3b are supported, but H1b, H4b, H5b, and H6a are not supported.

Similarly, male and female students' perceptions of targeting efforts were analyzed and presented in Table 1. The positive signs of the means to all the responses to targeting questions suggest that male students would prefer to attempt to sell to female buyers (mean of .61), would be more successful in selling to female buyers (mean of .72), would prefer selling to female buyers (mean of .81), and would prefer to focus more of their efforts on female buyers (mean of .49). All of these results are significant at the p < .01 level. These findings reveal a significant gender effect for male students in their targeting efforts in favor of female buyers. However, the results are opposite of the predictions of the above theories and hypotheses; therefore, H7a, H8a, H9a, and H10a are not supported.

The results of a similar analysis for female students are also included in Table 1. Since none of the means for targeting questions are significant, female students don't appear to have any preference for; targeting male versus female buyers. These findings show that there is no gender effect (from female students) on targeting efforts for potential customers. As a result, hypotheses H7b, H8b, H9b, and H10b are not supported.

Comparison of Male versus Female Applicants

Also, the study compared male vs. female student perceptions of the gender effect during each step of the selling process, and the results are presented in Table 2. Comparisons of the mean

scores for the selling steps suggest that there is no significant difference between male and female students in: confidently introducing themselves to either male or female buyers (p > .05); overcoming objections from male or female buyers (p > .05); engaging in a trial closing (p > .05); and successfully closing the sale (p > .05). However, the study did reveal a significant difference between male and female applicants for two steps of the selling process. The positive signs of the means for making a presentation indicate that both male and female students feel they would be more successful in giving sales presentations to female buyers. It appears that female students also feel they will be more successful (mean of .77) than male students (mean of .09) in making sales presentations to female buyers (p < .01). The results also indicate a significant difference between male and female students in answering questions from buyers (p < .01). A negative sign of the mean for male students indicates that feel they would be more successful in answering questions from male buyers, whereas the positive sign of the mean for female students indicate that they feel they would be more successful in answering questions from female buyers.

Table 2: Comparisons of Male vs. Female Applicant Perceptions of Gender Effect in Selling Process and Targeting Potential Customers					
Selling Process	Male Applicant		Female Applicant		p value
	Mean	St. Dev	Mean	St. Dev.	
Confidently introducing self to potential buyers	-0.11	2.04	0.01	2.18	0.569
Making the sales presentation	0.09	1.82	0.77	2.11	0.001
Answering any questions the client might have	-0.04	1.76	0.68	1.75	0
Overcoming various objections buying	0.26	1.95	0.13	2.01	0.501
Engaging in a trial closing	0.13	2.01	-0.16	1.9	0.14
Successfully closing the sale	0.09	2.06	-0.07	2	0.464
Targeting Potential Customers	Mean	St. Dev	Mean	St. Dev	p value
If hired as a salesperson, most strongly attempt to sell to man or women	0.61	2	0.23	2.3	0.082
As a sales person, most successful selling to man or women	0.72	2.41	-0.03	2.71	0.004
If you had a choice, you would most strongly prefer selling to?	0.81	2.52	-0.13	2.48	0
When finding new buyers, you would prefer to focus most of your efforts on males or females, assuming an equal number of buyers are available?	0.49	2.07	0.17	1.94	0.121
Scale: Definitely Males -5 -4 -3 -2 -1 0 1 2 3 4 5 Definitely Females					

Concerning targeting efforts, the mean scores of .61 for male students and .23 for female students suggest that both genders would more strongly attempt (or target) to sell to female buyers. Male students seem to have a stronger preference to target female buyers than female students, where the difference is somewhat significant (p < .10). In terms of selling success, male students perceive they will be more successful in selling to female buyers (mean of .72), whereas female students perceive they will be more successful in selling to male buyers (-.03), where the means are significantly different (p < .01).

In addition, the results illustrate a significant difference between the selling preferences of male and female students (p < .01). If they had a choice, male students would prefer selling to female buyers (mean of .81), while female students would prefer to focus their efforts on finding new male buyers (mean of -.13). When finding a new buyer, both male and female students prefer to focus most of their effort on prospecting female buyers; however, the difference was not significant (p > .10). The results regarding selling efforts contradict the predictions of the Similarity-Attraction Paradigm (Byrne, 1971; Byrne & Neuman, 1992; Graves & Powell, 1995). In fact, these findings are the opposite of the predictions of the theories used in this and prior studies. As suggested by Dwyer et al. (1998), it appears that gender similarity would not provide any advantage, and may even reduce sales opportunities.

DISCUSSION AND IMPLICATIONS

Unlike prior gender studies in the sales field where gender effects were investigated from the recruiters' point of view or from the point of view of salespeople, this study examined gender effects on each step of the selling process and targeting potential customers from the applicant's perception (business student) as a potential salesperson. The results of the study indicate that the entire sample of students feel they would be more successful with female buyers than male buyers in making sales presentations, answering questions, and overcoming objections. Regarding the other steps of the selling process, students feel they would be equally successful in their selling efforts to both male and female buyers. Concerning targeting and prospecting efforts, the study found that all students would more strongly prefer to target female buyers, would be more successful selling to and prefer selling to female buyers and would prefer to focus more of their selling efforts on female buyer. These results indicate a significant gender effect (bias) for all students in favor of preferring female buyers in their selling process and targeting efforts. These findings imply that both male and female students may need to be trained in selling and targeting male buyers. This could be important in increasing sales.

The results by gender indicate that male students believe they will be equally successful with both male and female buyers at each stage of the selling process. Unlike the predictions of the Similarity-Attraction Paradigm (Byrne, 1971; Byrne and Neuman, 1992; Graves and Powell, 1995), Social Identity Theory (Tajfel, 1982; Tajfel and Turner, 1986); Self-Categorization Theory (Turner,

1982, 1985), these findings suggest a gender effect for male students during the selling process. These findings contradict the results of some previous studies (Crosby et al., 1990; Smith, 1998; Churchill et al, 1997; 1975), which suggested that male students should be more successful during each step of the selling process to same gender (male) buyers. However, the results are consistent with the findings of some other studies (Dwyer et al., 1998; Jones et al., 1998) that show that gender similarity does not seem to be a factor for sales performance. The implication is that male students would not need special training to be successful in selling to male or female buyers; rather they might be trained in improving their overall selling effectiveness.

However, the current study did find the existence of a gender effect for female students during two steps of the selling process. It seems that female students feel they would be more successful with female buyers than male buyer in making sales presentations and answering questions. These findings are consistent with the predictions of the Similarity-Attraction Paradigm (Byrne, 1971; Byrne and Neuman, 1992; Graves and Powel, 1995), Social Identity Theory (Tajfel, 1982; Tajfel and Turner, 1986) and Self-Categorization Theory (Turner, 1982, 1985). These theories suggest that individuals tend to be attracted to, or seek membership in, groups that are (demographically) similar to themselves, indicating that there would be a perceived attraction between a salesperson and a buyer based on perceived similarity. On the other hand, the study found no gender effect for female students during the other steps of the selling process. The results, therefore, provide limited support for these theories. The findings for both male and female students suggests that in selling to male and female buyers, male students would be successful during all stages of the sales process, while female students would be successful during certain stages. These findings could be helpful for managers in their recruiting and training efforts.

The comparisons of male students vs. female students found significant differences between the two genders for only two stages of the selling process. The results show that both male and female students feel they would be more successful in giving sales presentation to female buyers. However, female students have a stronger preference for female buyers. The study also found a significant gender difference between male and female students regarding answering buyer questions. Specifically, while male students feel they would be more successful in answering questions from male buyers versus female buyers, female students feel they would be more successful answering questions from female buyers than male buyers. There were no significant differences between male and female students for other steps of the selling process. Some of these findings are consistent with the predictions of the above gender effect theories, others are not. Also, some of these findings are consistent with the findings of Crosby et al. (1990), Dwyer et al. (1998), and Jones et al. (1998), while others are not consistent with their findings. The results of the current study show that the gender effect on each step of selling process does not follow any predictable, consistent pattern. As reported by Dwyer et al. (1998) and Jones et al. (1998), female salespeople seem to be just as effective as male salespeople, and gender similarity does not appear to be a significant factor in sales performance. In fact, contrary to the Access and Legitimacy Paradigm

(Thomas and Ely, 1996), these results suggest that companies should probably not try to match seller gender with buyer gender.

Regarding targeting efforts, comparisons of male students vs. female students found significant differences between the two genders. The results show that both male and female students would more strongly attempt to sell to female buyers, with male students having a stronger preference. In addition, male students feel they would be more successful, and would prefer, selling to female buyers, whereas female students feel just the opposite. Again, these findings are not consistent with the predictions of the theories and prior research (Crosby et al., 1990; Dwyer et al., 1998; Jones et al., 1998).

Managerial Implications

This study examined applicant (business student) perceptions of gender effects during the selling process and targeting efforts. Understanding student perceptions of gender effects at each stage of the selling process and targeting efforts, rather than the sales outcome, provided a different perspective on gender effects. The results of the current study could have several managerial implications for companies in recruiting their sales force and in designing sales training programs. The first managerial implication deals with sales efforts during the selling process. As both male and female students believe they would be successful with both male and female buyers during all but a few steps of the selling process, matching the gender of the target market with the gender of a salesperson should not be a major factor in the recruiting/hiring decision. Companies may not gain any advantage by matching the gender of salespeople with buyer gender as suggested by previous studies (Crosby et al., 1990; Smith, 1998; Churchill et al, 1997; 1975) and by the Access and Legitimacy Paradigm (Thomas and Ely, 1996). To the contrary, as suggested by Dwyer et al. (1998) and Jones et al. (1998), companies could attract and recruit applicants from both genders resulting in hiring the best qualified persons for sales jobs. This could have a positive impact on the firm's sales force productivity and sales performance.

The second managerial implication is that companies could identify potential gender effects for each stage of the sales process, rather than considering the gender effect on overall sales outcomes as suggested by prior research (Dwyer et al., 1998, Jones et al., 1998). This would allow companies to have a better understanding of the gender effect on certain steps of selling process so that companies can design special training programs to deal with specific problem areas. For example, the results show a significant gender effect for female students who seem to feel more comfortable with female buyers in making sales presentations and answering questions. Once this is identified, companies could design training programs to improve female students success in dealing with male buyers.

The third managerial implication deals with targeting and selling success with potential buyers. It seems that students prefer to target female buyers, feel they would be more successful in

selling to female buyers and prefer to sell to female buyers. The reason for such preference was not within scope of this study, but the implication is that companies might focus their prospecting efforts on potential female buyers in order to increase sales. Alternatively, they might have to train new recruits to improve their effectiveness in prospecting and selling to male buyers. These findings imply that companies may not gain any advantage by matching the gender of salespeople with buyer gender as suggested by the Access and Legitimacy Paradigm (Thomas and Ely, 1996). To the contrary, both male and female students appear to prefer to target to and sell to female buyers.

Finally, the results of this study show that, unlike the predictions of the Similarity-Attraction Paradigm (Byrne, 1971; Byrne & Neuman, 1992; Graves & Powell, 1995), Social Identity Theory (Tajfel, 1972, 1982; Tajfel & Turner, 1986), and Self-Categorization Theory (Turner, 1982, 1985), there is no consistent gender effect where same gender relationships would be more effective and preferable during the targeting and selling process. In order to create a successful sale force, companies must train their new recruits on targeting and successfully completing sales to male buyers. This is the same for targeting and for all stages of the selling process. These findings could be very valuable for companies in developing training programs for the specific problem areas identified.

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WORD-OF-AUTHOR ADVERTISING IN TEXTBOOKS: THE ROLE OF BRAND FAMILIARITY AND PLACEMENT REPETITION ON RECALL AND RECOGNITION

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ABSTRACT

This study considers factors that may influence the recall and recognition of word-of-author advertising —the practice of including branded references within a book. Within the domain of WOA advertising in textbooks, our results indicate that the WOA advertising of a familiar firm enjoys an advantage over that of an unfamiliar firm with respect to both recall and recognition. The effect of WOA repetition on recall is moderated by familiarity with the advertised brand. Theoretical and managerial implications are discussed.

INTRODUCTION

Brand placement in the media of popular culture has burgeoned in recent years, projected to reach over 6.3 billion dollars in spending for 2008 (Education Policy Studies Laboratory 2005). In a Bruce Springsteen music video*, Born in the USA,* the music is accompanied by visual images of Miller beer. Mountain Dew has been liberally sprinkled throughout movies such as *Secret Window*, while Aquafina caught attention in the hit movie, *National Treasure.* References to branded products are not, however, confined to the media of entertainment; brand names and logos have also infiltrated academic textbooks. Indeed, a recent mathematics text contains visual or verbal references to Sony, Spalding, Disney, Warner Bros., Burger King and McDonalds (Hayes, 1999).

Friedman (1985, 1986, 1987, 1991) uses the term *word-of-author advertising* (WOA advertising) to describe the appearance of brand names in screenplays, television dramas, novels, lyrics and other "popular cultural products." WOA advertising may be motivated by creative considerations, such as the desire to lend verisimilitude to a drama. In contrast, when WOA advertising results from commercial considerations (i.e., brand owners are charged for a brand's appearance), the practice is considered brand placement (Karrh 1998).

WORD-OF-AUTHOR ADVERTISING IN TEXTBOOKS

Authors of textbooks often include practical applications of theoretical content; consequently, many texts are replete with WOA advertising. For example, the *text Global Marketing Strategies* (1998) contains thirty-two pages that refer to Ford or Ford products, while references to Wal-Mart adorn thirteen pages of the text *Electronic Commerce: A Managerial Perspective* (2000). Hewlett Packard is featured on eight of the pages of the text *Organizational Behavior* (1998). Brand names also appear in non-business texts; for instance, *Mathematics: Applications and Connections* (1999) is sprinkled with references to Sony, Spalding, Disney, Warner Bros., Burger King and McDonalds (Hays 1999). Extant research has not addressed the potential benefits that might accrue to firms that receive WOA advertising. In the present paper we examine the effects of WOA advertising on consumer memory.

Recent research in marketing considers recall and recognition to be measures of explicit memory (Law and Braun 2000, Shapiro and Krishnan 2001). In contrast, implicit memory describes changes in task performance that are induced by exposure to a stimulus without the task performer being able to recollect the exposure episode (Schacter 1987). Thus an implicit memory of an advertising exposure may influence brand choice even when the consumer is unable to recognize the advertiser (Shapiro and Krishnan 2001). Consequently, we consider the impact of WOA advertising on measures of both explicit (advertiser recall and recognition) and implicit (brand choice) memory.

Researchers have examined the levels of brand recall and recognition generated by brands placed in movies (Babin & Carder, 1996; Brennan, Dubas & Babin, 1999; Gupta & Lord, 1998;) and television programs (Law & Braun, 2000). The extant literature on audience recollections of brand placements in movies has concentrated on the effects of variations in the *presentational characteristics* of the placement. These presentational characteristics include the mode of placement exposure—audio-visual versus visual-only (Gupta & Lord, 1998; Law & Braun, 2000, Brennan and Babin 2004), the time on-screen (Brennan, Dubas & Babin, 1999), and the relative prominence of the brand-placement (Brennan, Dubas & Babin, 1999; Gupta & Lord, 1998; Law & Braun, 2000). Given the tendency for WOA references to be repeated within a text, the present paper also considers the effects on recall, recognition and choice of one *presentational characteristic* --the extent of WOA advertising repetition. Our study also considers the effects of (pre-study) brand familiarity with a WOA advertiser.

Word-of-Author Advertising and Explicit Memory

Prior research in advertising suggests that familiar brands enjoy a recall advantage over brands that are less familiar (Johar & Pham, 1999; Nedgunadi, 1990). The recall advantage for familiar WOA advertisers over their less familiar counterparts may occur at the time of retrieval

and/or during encoding. With respect to retrieval, the spreading-activation model of memory (Anderson, 1983; Collins & Loftus, 1975) asserts that brand retrieval may be triggered by the memory of a node (e.g., product category) with which it is associated, with stronger associations appearing to enhance brand retrieval (Lee & Sternthal, 1999; Negunadi, 1990). Accordingly, a familiar brand should have a greater likelihood of being retrieved than an unfamiliar brand, given the stronger associations of the former with the product category (Negunadi, 1990).

With respect to encoding, subjects who encounter a familiar name (e.g., a familiar WOA advertiser) are also more likely to encode the encounter into memory than is the case when they encounter an unfamiliar name. In a series of experiments, Watkins, LeCompte & Kim (2000) demonstrate that a list of words which occur more frequently in everyday language (e.g., *letter, earth, captain, hotel* and *flower*) are more recallable than a list of words which occur more rarely (e.g., *proctor, kilt, mango, scooter* and *cobra*), even when neither list shares an association with an underlying node that would facilitate retrieval. Thus, WOA advertisers are more likely to enjoy both an encoding and retrieval advantage over their less familiar less familiar counterparts.

Advertising research also suggests that the repetition of an advertisement tends to increase brand familiarity (Berger & Mitchel, 1989) and brand name recall (Unnava & Burnkrant, 1991). Clearly, the additional opportunity to encode a WOA advertising reference should enhance its retrieval over a comparable reference that receives only a single execution. Whether WOA advertiser repetition magnifies the anticipated recall advantage for familiar WOA advertisers over their less unfamiliar counterparts is an issue of calibration. The additional encoding opportunity enhances the possibility that the encoding advantage of the familiar WOA advertiser is realized; for example, irrespective of familiarity, single WOA advertising references may not be encoded by a reader with inconsistent concentration. In contrast, potential ceiling effects on the recall of familiar WOA advertisers may limit the gains associated with repetition. In experiment one we test the following hypotheses:

H1:   *The unaided-recall of familiar WOA advertisers will be greater than the unaided-recall of less familiar WOA advertisers.*

H2:   *WOA advertising repetition will increase the unaided-recall of WOA advertisers.*

EXPERIMENT 1

Method

Subjects and design

The forty-one subjects who participated in quasi-experiment one (experiment 1) received extra-credit in an undergraduate marketing course. The subjects, undergraduates at a southeastern

university, were asked to bring their *Principles of Marketing* textbooks to the experiment. Upon arrival they were told that they would take part in a study designed to measure the effectiveness of alternative distance learning programs. In phase one of the experiment, subjects were informed that the study was designed to measure the average level of knowledge that was likely to be gained by a class that a textbook chapter prior to an on-line instructional session. Consistent with the guise, the subjects were informed that after reading the *New Product Development* chapter from their text, they would be asked a series of questions designed to measure their knowledge of new product development. The content contained in the reading had not previously been discussed in the course, and subjects were screened to ensure that they had not previously read the relevant chapter. The subjects were told that they had about 35 minutes to read the chapter. At the end of the reading period (phase one), the subjects completed a ten-minute filler task that was consistent with the guise of the study. In phase two of the experiment, the subjects were asked to write down the names of all the companies that had been referred to in the reading.

Coding

A pretest required subjects, who did not take part in the experiments, to rate the familiarity of each firm that received one or two WOA advertisements in the chapter which was to serve as the experimental stimulus in experiment one. Subjects were asked to consider whether each firm was an industry leader. A post experimental test confirmed that subjects rated firms deemed to be "leaders in their industry" as significantly higher in familiarity.

Each correct, unaided, WOA advertiser recollection reported by each subject in phase two of the experiment was coded into one of four categories developed in the pretest: familiar-firm, one WOA advertisement; familiar-firm, two WOA advertisements; unfamiliar-firm, one WOA advertisement; unfamiliar-firm, two WOA advertisements. The number of WOA advertiser recollections in each category was recorded for each subject. Next, to counteract the potential for the presence of the higher base-rate of familiar (versus unfamiliar) WOA advertisers in the stimulus to contaminate the results, an unaided-recall score for each subject was created by dividing the number of WOA advertisers recalled by each subject in each category by the total number WOA advertisers appearing in the assigned chapter in that category (familiar-firm, one WOA advertisement = 13 firms; familiar-firm, two WOA advertisements = 4 firms; unfamiliar-firm, one WOA advertisement = 5 firms; unfamiliar-firm, two WOA advertisements = 2 firms). Thus, the coding procedure for phase two resulted in a 2 x 2 (WOA advertiser familiarity x WOA ad repetition) design in which all four evaluations were collected within-subjects.

Results

Umesh, Peterson McCann-Nelson and Vaidyanathan (1996) note that when research questions call for comparisons of cell means (rather than a comparison of residual effects present in cell means after main effects have been extracted), that it is inappropriate to conduct comparisons of cell means on the basis of a significant omnibus test of interaction in the ANOVA model. Accordingly, a planned-comparison analysis was performed on the combinations of the four cell means relevant to the hypotheses tests [Wilks' Lambda $= .41$; $\underline{F}(3, 38) = 18.14$, $p < .001$].

H1 contends that the unaided-recall for familiar WOA advertisers will be superior to the unaided-recall obtained by unfamiliar advertisers. The results support H1. Subjects exhibited a higher recall of WOA advertisers when the WOA advertisement referred to a familiar firm than when the WOA advertisement referred to a unfamiliar firm [$M's = 9.99$ versus 0.61; $\underline{F}(1, 40) = 46.85$, $p < .001$].

H2 contends that unaided-recall for a WOA advertiser will be positively related to WOA advertising repetition. Consistent with H2, subjects exhibited a higher recall of WOA advertisers when the advertisement was repeated in comparison with the single execution [$M's = 7.32$ versus 3.28; $\underline{F}(1, 40) = 9.36$, $p < .004$]. An analysis of H2 within WOA advertiser-size, however, revealed that the increase in the recall of WOA advertisers that could be attributed to advertisement repetition was significant only for familiar WOA advertisers [$M's = 13.41$ versus 6.57; $\underline{F}(1, 40) = 8.14$, $p < .007$]. In contrast, recall of unfamiliar WOA advertisers was not significantly increased by WOA advertisement repetition [$M's = 1.22$ versus 0.00; $\underline{F}(1, 40) = 1.00$, $p > .323$, see Table]. Thus, familiarity appears to moderate the impact of WOA advertisement repetition on unaided-recall.

Discussion

The results of experiment one indicate that familiar WOA advertisers enjoy an unaided-recall advantage over unfamiliar WOA advertisers. The effects of WOA advertisement repetition appear to be moderated by familiarity. Subjects who were given an additional opportunity to process the WOA advertisement significantly increased their unaided-recall of familiar WOA advertisers. In contrast, the unaided-recall of unfamiliar WOA advertisers was not significantly increased by the repetition of the WOA advertisement.

The results of experiment one are not inconsistent with the notion that familiar WOA advertisers enjoy both encoding and retrieval advantages over their unfamiliar counterparts. The experiment does not, however, demonstrate that familiar WOA advertisers enjoy an encoding advantage over their unfamiliar counterparts; the superior recall exhibited by the familiar WOA advertisers may have resulted entirely from superior retrieval.

The notion that superior retrieval alone could explain the recall advantage enjoyed by familiar WOA advertisers would require the *frequency effect* to disappear. A recent study by Watkins, LeCompte & Kim . (2000) indicates that the frequency effect disappears and, may indeed reverse itself— the *mixed list paradox*—when two conditions are fulfilled. First, the familiar and rare words must be presented on the same (mixed) list. Second, subjects must process the words under the expectation that they will be subjected to a recall test (Delosh & McDaniel, 1996; Watkins, LeCompte & Kim, 2000). Ostensibly, the two conditions that give rise to the *mixed-list paradox* are likely to be present when subjects process a text that contains WOA advertisers. First, rather than appearing in separate parts of a text, references to familiar and unfamiliar WOA advertisers are likely to be mixed within the text. Second, although the recreational reading of educational texts by students is not unknown, the reading of most students is likely to be motivated by an impending examination. Notwithstanding such arguments, we suspect that the *mixed-list paradox* is unlikely to emerge when students anticipate being tested on the arguments or principles discussed in a text (as is likely to be the case in practice), rather than on their ability to recall the illustrators (i.e., WOA advertisers) of those arguments. Accordingly, we contend that familiar WOA advertisers will enjoy an encoding advantage over their unfamiliar counterparts. In experiment two, by employing a recognition test that attempts to control for the effects of retrieval, we attempt to illuminate the effects of WOA advertiser-size on encoding.

EXPERIMENT 2

The extent to which the results obtained in experiment one may generalize to WOA advertiser recognition is addressed in experiment two. We anticipate that the unaided-recall advantages demonstrated for familiar WOA advertisers over unfamiliar WOA advertisers in experiment one will also extend to recognition. Such a view is consistent with the idea that familiar WOA advertisers will enjoy encoding advantages over their unfamiliar counterparts (i.e., the *frequency effect*), and inconsistent with the *mixed-list paradox.* The effects of repetition on WOA advertiser recognition are also expected to be consistent with those reported for the effects of repetition on unaided-recall in experiment one.

> H3: A familiar WOA advertiser will attain a higher level of recognition than that attained by a less familiar WOA advertiser.

> H4: WOA advertisement repetition will induce higher levels of WOA advertiser recognition.

Method

Subjects and design

Thirty-one subjects participated in a 2 x 2 (WOA advertiser familiarity x WOA ad repetition) within-subjects design. The experimental guise and text stimulus from experiment one were re-employed in quasi-experiment two. (experiment 2). In addition, two firms from each of the four experimental conditions were employed to create the WOA advertiser familiarity and WOA ad conditions. Subject recognition scores were calculated by averaging the recognition scores for the two WOA advertisers in each treatment condition.

The font and font-size employed in the WOA reference for each of the eight firms was identical. Although the experimental stimulus contained a number of graphs and illustrations, none referred to the WOA advertisers selected for experiment two. In an attempt to control for the effects of primacy and recency in the recollection task, each target WOA reference was both preceded and succeeded by at least six other WOA references that were not involved in the recognition task. When selecting the WOA advertisers for experiment 2, care was taken to balance the valence of the author's comments associated with the WOA references (across familiarity and within each repetition treatment). The single WOA advertisement execution conditions each contained a firm with one positive and one neutral reference. Within each WOA repetition condition, each firm received one positive and one neutral reference. The neutral references typically associated a firm with a particular new product development technique (e.g., a firm used a concept test to create a brand of dog food). The positive references associated a firm with a successful new product or a pleasant characteristic (e.g., a firm's product was described as "litter free").

Decoy-foils

A number of studies have examined the extent to which self-reported recollections are influenced by question characteristics (Menon, 1993; Schwarz, 1990; Schwarz, Hippler, Deutsch & Strack, 1985). Recent research in event-sponsor recognition (Johar & Pham, 1999) suggests that recognition based on direct retrieval of the event-sponsor association from memory may be supplemented by the use of constructive recognition strategies. These constructive recognition strategies rely upon inferences derived from the relative size of the sponsor *vis-à-vis* the decoy foil that is present at the time of recognition (Johar & Pham, 1999). For example, a subject who cannot retrieve an event-sponsor from memory may make an inference based upon the relative size of the two candidates. In particular, Johar & Pham contend that the larger of the two candidate event-sponsors may be selected on the basis that the larger firm is more likely to have the financial resources that would permit event sponsorship.

In the case of experiment two in the present study, we controlled for the possibility that the relative familiarity of the WOA advertiser *vis-à-vis* the decoy firm (foil) might serve as a retrieval cue. For example, if the foil is dissimilar in familiarity (distinctive) to the WOA advertiser, subject recognition of both familiar and unfamiliar WOA advertisers may be artificially inflated. In particular, assume that in spite of being unable to recall the name of a WOA advertiser, a subject is nevertheless able to retrieve two cues: (1) the industry from which the two candidates are drawn that was employed to illustrate an argument in the chapter reading, (2) whether the firm used in the illustration was familiar or unfamiliar. If a familiar WOA advertiser were pitted against a distinctive (unfamiliar) foil, or an unfamiliar WOA advertiser pitted against a distinctive (familiar) foil, the WOA advertiser could be selected constructively (by a process of elimination). These retrieval cues do not facilitate selection by elimination when WOA advertisers are pitted against foils that are non-distinctive (i.e., similar in familiarity to the WOA advertiser). Accordingly, after the results of a pretest, eight non-distinctive foils (from the same industry as their respective WOA advertiser) appeared as decoys on the recognition task.

Results

A planned comparison analysis was performed [Wilks' Lambda = .47; $F(3,28) = 10.29$ $p <$ .001]. H3 contends that familiar WOA advertiser will attain higher levels of recognition than unfamiliar WOA advertisers when the judgement environment involves non-distinctive foils. The results of the planned comparison support H3. Subjects recognized a significantly higher number of familiar (versus unfamiliar) WOA advertisers [$M's$ = 1.85 versus 1.58; $\underline{F}(1, 30) = 17.85$, $p <$ .001, see Table].

H4 contends that the repetition of a WOA advertisement will result in higher levels of recognition when the judgement environment involves non-distinctive foils. The results support H4 [$M's$ = 1.81 versus 1.63; $\underline{F}(1, 30) = 4.67$, $p < .04$]. An analysis of H4 within WOA advertiser-size, however, reveals that the increase in recognition associated with repetition was marginally significant for familiar WOA advertisers [$M's$ = 1.94 versus 1.77; $\underline{F}(1, 30) = 2.95$, $p < .1$]. In contrast, subjects recognition of unfamiliar WOA advertisers was not significantly increased by WOA advertisement repetition [$M's$ = 1.68 versus 1.48; $\underline{F}(1, 30) = 1.67$, $p > .205$ see Table]. The moderating influence of familiarity on the effects of WOA advertisement is directionally similar to that observed in experiment one. Finally, it should be noted that recognition accuracy differed from chance in all four treatment conditions ($p's < .05$).

Discussion

The results of experiment two indicate that familiar WOA advertisers obtain greater recognition than unfamiliar WOA advertisers. The repetition of a WOA advertisement in a text also

induces higher levels of recognition in comparison with the single execution. The moderating role of familiarity on the effect of WOA advertisement repetition on recognition is directionally similar to that which was observed for unaided-recall in the first experiment.

TABLE MEANS FOR RECALL AND RECOGNITION OF WOA ADVERTISERS				
	Placement = 1		Placement = 2	
	Familiar Firms	Unfamiliar Firms	Familiar Firms	Unfamiliar Firms
Unaided-Recall[a]	6.57	0.00	13.41	1.22
Recognition[b]	1.77	1.48	1.94	1.68
Choice[c] advertising present	1.35	1.25	1.15	1.3
Choice[c] advertising present	1.2	1.2	1.15	1.3

[a] Percent of firms correctly recalled within each condition (experiment 1).
[b] Number of brands recalled within each condition (range 0-2) (experiment 2).
[c] Number of target brands chosen (range 0-2) when WOA advertising is present (experiment 3).
[d] Number of target brands chosen (range 0-2) when WOA advertising is absent (experiment 3).

GENERAL DISCUSSION

For WOA advertisements that appeared in a college textbook, our study investigated the influence of the familiarity of a firm appearing in a WOA advertisement and the repetition of the advertisement on recall and recognition.

The results of our experiments indicate that the WOA advertisement of a familiar firm enjoys an advantage over that of an unfamiliar firm with respect to both recall and recognition. Further, our results indicate that the effect of WOA advertisement repetition on recall is moderated by the size of the firm that is referenced in the WOA advertisement. Specifically, familiar WOA advertisers benefited from a significant increase in recall (and marginally significant increase in recognition) when subjects were afforded an additional opportunity to encode the WOA reference. In contrast, the recall and recognition of unfamiliar WOA advertisers were unaffected by WOA advertisement repetition. Furthermore, our results demonstrate that even when denied the recall advantage that familiarity generates via superior retrieval (Negunadi, 1990), the encoding advantage enjoyed by familiar WOA advertisers is sufficient to induce a recognition advantage over unfamiliar WOA advertisers.

Theoretical implications.

Within the domain of event-sponsor identification, research by Johar & Pham (1999) indicates that sponsor recognition accuracy is not significantly affected by sponsor-size when non-

distinctive foils are present at the time of both encoding and retrieval. Johar & Pham exposed subjects to fictitious newspaper articles about sporting events that referred not only to the sponsor of the event, but also to the names of three other firms (from which foils were selected) from the same industry as the event sponsor. Johar and Pham had expected the recognition advantage associated with sponsor-size to diminish (but not disappear) when non-distinctive foils replaced distinctive foils on the recognition instrument. Their premise was that subjects unable to directly retrieve the event-sponsor would be denied the opportunity to constructively identify the event sponsor through the use of a heuristic: namely, that familiar companies, with extensive promotional budgets, would be more likely to be involved in sponsorship. Nevertheless, Johar & Pham anticipated that, as a result of superior encoding of the event-sponsor relationship, familiar sponsors would still retain a direct retrieval advantage over their less familiar counterparts. Accordingly, the authors were surprised to find that the recognition advantage associated with sponsor-size disappeared when event-sponsors were pitted against non-distinctive foils during the recognition task. Our findings suggest that an encoding advantage for familiar sponsors may emerge when non-distinctive foils are absent at the time of encoding and present only when a judgement of recognition is required.

Practical Implications

For managers involved in brand placement transactions, our findings draw attention to the potential for the effectiveness of brand placements to be influenced not only by presentational characteristics (Brennan, Dubas & Babin, 1999; Gupta & Lord, 1998; Law & Braun, 2000), but also by variation in an audience characteristic: brand familiarity.

Our results suggest that marketing mangers with brand recall and brand recognition objectives should explore opportunities to place WOA advertisements in books. Walsh (2000) notes that some educational institutions are partially funded by companies who are granted advertising opportunities within the scholastic environment. For example, with the exception of New York, all the school systems in the USA participated in a program that incorporated twelve minutes of Channel One programming and advertising into the daily curriculum; in exchange, the distributors of Channel One programming provided the school systems with free audio-visual equipment (Wyatt 2000b). School systems have also bartered advertising for computers and have permitted advertising on school buses, school menus, school hallways and textbook covers (Rassmussen, 1997; Stark, 2000; Wyatt, 2000a). This evidence suggests, that at least within the United States, a market for texts containing sponsored WOA advertising could develop if the publisher or author of the texts were to offer the adopting educational institutions some form of consideration (e.g., funding for an educational program or a reduction in the purchase price of affected textbooks).

Directions for Future Research

In our quasi-experiments differences in pre-study brand familiarity were measured. Measured variables enhance the ecological validity of an experimental design (Menon, 1993); however, such designs suffer from the fact that treatment conditions may differ from one another on variables other than those that were measured (i.e. the results are correlational). Our use of multiple firms within each treatment condition mitigates this threat to the internal validity of the research; it could be further alleviated by replications that utilize alternative sets of WOA advertisers.

Future research might examine WOA advertising within the realm of the novel. Since World War II, the identification of non-fictional products has become increasingly prevalent within the genre of fiction (Friedman, 1985). References to branded products not only add verisimilitude to the environments inhabited by the characters, but also assist an author in expediting the communication of their social backgrounds and personality traits (Karrh, 1998; Delorme & Reid, 1999). Accordingly, future research might consider the extent to which the patronage of leading characters in a novel may condition attitudes (Gorn, 1982) towards the companies and products that feature in WOA advertisements. An assessment of such conditioning effects is likely to be of particular interest to marketers with brands that compete in markets that lack a dominant brand —markets where conditioning has been shown to influence brand choice (Baker, 1999; Miniard, Sirdeshmukh & Innis, 1992).

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