Volume 13, Number 1 **ISSN 1095-6298**

ACADEMY OF MARKETING STUDIES JOURNAL

Ismet Anitsal
Editor
Tennessee Tech University

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Whitney Press, Inc.

Printed by Whitney Press, Inc.
PO Box 1064, Cullowhee, NC 28723

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LETTER FROM THE EDITOR

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EMBRACING ENROLLMENT MANAGEMENT: A COMPREHENSIVE APPROACH TO COLLEGE STUDENT MARKETING

Brian A. Vander Schee, Aurora University

ABSTRACT

Small private colleges that are heavily dependent on tuition for fiscal viability are challenged each year to maintain and grow student enrollments. However, the size of smaller institutions also affords them the opportunity to react quickly to changes in the student market. This also allows them to readily assume a comprehensive approach to college student marketing by adopting an enrollment management program. A comprehensive enrollment management program includes the following five components: institutional marketing, admissions/recruitment, retention programs, planning, and model of coordination.

The purpose of this survey-based longitudinal study is to investigate how Council for Christian Colleges and Universities member institutions have responded to enrollment and resource pressures with enrollment management strategies. The analysis in this study focused on enrollment management practices at the program and component level. The results indicate that having certain components in place has a positive influence on student recruitment and retention. Implications for college student marketers and enrollment managers in higher education are discussed and considerations for future research are also highlighted.

INTRODUCTION

As the cost of providing post secondary education continues to increase and government support steadily decreases, religiously-affiliated, private, four-year colleges are forced to rely more heavily on tuition revenue for economic viability. Not only does this require attracting a higher number of new students to the institution, it necessitates increasing the retention of students who are already enrolled. Religiously-affiliated, private, liberal arts colleges in particular are vulnerable to changes in enrollment. The problem is exacerbated by the fact that they really only compete for less than 1% of the potential college student market. Breneman (1994) speaks of them as often lacking in sizable endowments, heavily dependent on tuition, and without direct support from government. They can fail if times are hard enough.

It is clear that college student marketing concepts are needed to achieve institutional enrollment goals (Whiteside, 2004). At the same time, it is also clear that colleges and universities have received marketing practices with mixed emotions. There is even confusion among higher

education administrators regarding marketing and advertising terms (Jugenheimer, 1995). What has emerged is a comprehensive approach to college student marketing known as enrollment management. Religiously-affiliated, private, liberal arts colleges have implemented an enrollment management program to varying degrees with positive results in student recruitment and retention.

THEORETICAL AND CONCEPTUAL FRAMEWORK

"College student marketing describes the organized efforts to advance a college's mission and goals through targeted communications and the recruitment, selection, and retention of students whose capabilities will contribute to their own development and that of others" (Lay, 2004, p.4). Borrowing heavily from traditional principles of marketing, very few higher education institutions have mastered this integrated marketing approach (Black, 2004b). In fact, the common misperception that marketing is essentially advertising or selling still persists (Armstrong & Kotler, 2007).

At the same time, Kotler and Fox (1995), in their work on strategic marketing for educational institutions, suggest that marketing is a central activity of modern institutions. This is further supported by Kittle's study (2000) where college and university administrators indicated that the most important audiences for institutional messages were potential students in high school and their parents. There is desire, apprehension, expertise, and lack of know-how all present at the same time. This concept is characterized by the results of Newman's (2002) longitudinal study of marketing practices in higher education which indicate that there is not a consistent, coordinated effort among colleges to implement a comprehensive marketing plan.

A theoretical model for managing higher education student enrollments has been developed in tandem with college student marketing. In essence, enrollment management is the comprehensive approach to college student marketing expressed in terms more readily accepted and understood by higher education administrators. It is a rather recent development however; the increase in competition for students and the decrease in resources to execute effective strategies to recruit and retain students have heightened its adoption among many colleges and universities.

Enrollment Management Theory

Jack Maguire (1976) of Boston College is credited with the first use of the term *enrollment management* to describe institutional efforts to influence student enrollment. Kemerer, Baldridge, and Green (1982) formalized the concept proposing that it is not just an organizational concept; it is both a process and a series of activities that involve the entire campus. As a process, it includes tracking and interacting with students from the point of their initial contact with the institution until their graduation or departure from the institution. As an activity, enrollment management is designed to attract and retain students. Albright (1986) questioned whether enrollment management was just

another way to implement principles of marketing in higher education. Regardless of the terminology involved, the concept was accepted and flourished on college campuses.

Hossler modified his 1986 definition of enrollment management in 1991, stating that enrollment management is an organizational concept and a systematic set of activities designed to enable educational institutions to exert more influence on their enrollments. Organized by strategic planning and supported by institutional research, enrollment management activities concern student college choice, transition to college, student attrition and retention, and student outcomes (Hossler, 1991).

The theory of enrollment management was further developed by Dolence (1996) in his work on strategic enrollment management. He defines strategic enrollment management as “a comprehensive process designed to help an institution achieve and maintain the optimum recruitment, retention, and graduation rates of students, where ‘optimum’ is defined within the academic context of the institution.” Rather than outlining which specific areas within the institution should be involved in strategic enrollment management, Dolence simply states that any factor that influences a student’s decision to attend or continue enrolling is fair game for strategic enrollment management.

Although this is not a completely original concept, the emphasis on optimum enrollment is a unique approach. According to Dolence (1996) optimum is the benchmark enrollment figure that indicates revenues and expenditures are in balance. The concept is multidimensional and includes, but is not limited to, optimizing full-time equivalent enrollment, segmentation, geographic origin and quality. This new line of inquiry in strategic enrollment management has led to many iterations of the original concept (Black, 2001; Bontrager, 2004b; Bryant & Crockett, 1993).

Other adaptations of enrollment management theory include comprehensive enrollment management (McIntyre, 1997), applying business principles to the discipline (Blackburn, 1998), developing the enrollment management organization (Popovics, 2000), and focusing on enrollment management leadership (Jones, 2003). It is clear from the theoretical developments that enrollment management is an integral part of the work in college student marketing and that practical applications will continue as long there is concern regarding student enrollment.

Enrollment management should be a campus wide undertaking focused on student marketing, recruiting, admissions, and retention. It applies basic marketing principles by ascertaining and meeting the needs of individual students (Pollock & Wolf, 1989). Hossler (1984) identifies eight areas that enrollment management officers should be directly responsible. They include: student marketing and recruitment, pricing and financial aid, academic and career advising, academic assistance programs, institutional research, orientation, retention programs, and student services.

Although research (Huddleston & Rumbough, 1997) has focused on perceived effectiveness or level of satisfaction with enrollment management utilization, enrollment management efforts must reach institutional goals for effective execution (Henderson, 2005). This is particularly true for

institutions of higher education that cater to a limited student market like those of the Council for Christian Colleges and Universities.

The Council for Christian Colleges and Universities

The CCCU includes 102 American religiously-affiliated, private, four-year institutions in 30 states. These institutions are primarily undergraduate colleges with major emphasis on baccalaureate degrees in Arts and Sciences or Diverse Fields as classified by the Carnegie Foundation for the Advancement of Teaching (2006). In the fall of 2005, the full-time undergraduate student enrollment at CCCU member institutions ranged from 230 to 8,200 with an average enrollment of 2,160 students (CCCU, 2006). Institutional membership requires: a strong commitment to Christ-centered higher education, location in the U.S. or Canada, full regional accreditation, primarily four-year comprehensive college or university, broad curricula rooted in the arts and sciences, Christians hired for all full-time faculty and administrative positions, and sound finances (CCCU, 2006).

Quantitative Measures for Enrollment Management Utilization and Effectiveness

This study employs a survey instrument, adapted with permission from the author (Taber, 1989) to investigate the relationship of enrollment management utilization to student recruitment and retention. Taber based his work on enrollment management theory as defined by Baldridge, Kemerer, and Green (1982), Hossler (1986), Kemerer, Baldridge, and Green (1982), Kruetner and Godfrey (1981), and Muston (1984). Each of these theories maintains five components which are constant and can be expressed in common terms.

For an institution to have an identifiable enrollment management program the following five components must all be present and working together: (1) institutional marketing, including, but not limited to, research conducted to identify unique institutional characteristics and the characteristics of students who choose to enroll, employing varied recruitment techniques in order to reach different identified market segments, (2) admissions/recruitment, including, but not limited to, entering new student markets, student input into the evaluation of the recruitment process, regular evaluation of all recruitment materials and increasing need-based financial aid awards, (3) retention programs, including, but not limited to, early alert systems, an exit interview process that shares data within the institution, the presence of orientation programs, and person(s) responsible for the coordination of retention efforts, (4) planning, including, but not limited to, a specific documented long range plan for enrollment management, annual evaluation of enrollment management efforts and results, recent examination of institutional mission, goals and curriculum, and mechanisms to disseminate research data to decision makers, and (5) operation of a structure or model which coordinates enrollment management efforts. The four most widely recognized models of coordination of an

enrollment management program are: the Institutional Marketing Committee, the Staff Coordinator, the Matrix Model, and the Enrollment Management Division (Kemerer, Baldrigde & Green, 1982). More recently these have been renamed the Enrollment Management Committee, the Enrollment Management Coordinator, the Enrollment Management Matrix, and the Enrollment Management Division (Hossler, 2005; Huddleston & Rumbough, 1997; Penn, 1999).

An examination of successful enrollment management systems over the years indicates that there is no one right structure. Enrollment management must be adapted to the needs, organizational climate, and administrative skills on each campus (Hossler, 1987). A systematic approach to enrollment management requires all five components to be present and integrated in some form for an institution to have an identifiable enrollment management program in place (Muston, 1985).

In his work on evaluating the effectiveness of enrollment management programs, Dolence (1996) defines optimum effectiveness as the maximum number of students recruited, retained, and graduated given the academic policies, diversity, resources, and potential of the institution. A measure of student enrollment that can compare institutions of different sizes is needed. Admissions yield is an appropriate measure because it does not consider just the overall size of the freshmen class or the institution as a whole. Beyond enrolling new students to the institution, tuition revenue is generated by retaining new students to the second year. This makes freshmen retention rate another appropriate measure of enrollment management effectiveness that is generic to all institutions. The retention to graduation rate measures an institution's ability to keep students enrolled until they have completed their degrees. Not only is this a good indicator of institutional effectiveness, but it is a measure frequently published in college guides to market the institution to prospective students (Peterson's, 2005).

PURPOSE OF THE STUDY

The purpose of this study was to investigate changes in college student marketing at CCCU member institutions via current enrollment management strategies compared to those used at least occasionally in 1997. In each of the two years of the study, a secondary purpose was to investigate the relationship between the utilization of enrollment management strategies and student recruitment and retention at CCCU member institutions. Student recruitment was measured by admissions yield while student retention was measured by freshmen retention and retention to graduation. More specifically, this study had four research questions.

> *Research Question 1*: What changes have occurred from 1997 to the present in CCCU member institutions having an enrollment management program in place?

Research Question 2: At CCCU member institutions, to what extent is the utilization of an enrollment management program related to student recruitment and retention for each year studied?

Research Question 3: What changes have occurred from 1997 to the present in the length of time CCCU member institutions have had each of the five enrollment management components in place?

Research Question 4: At CCCU member institutions, to what extent is the utilization of each enrollment management component related to student recruitment and retention for each year studied?

METHODOLOGY

A causal-comparative method was employed in this longitudinal study. Changes in enrollment management program and component utilization from 1997 to the current study were calculated. The relationship between the utilization of an enrollment program and student recruitment and retention measures was investigated. The target population consisted of all U.S. member institutions of the Council for Christian Colleges and Universities. In 1997 the CCCU included 87 institutions from 29 states. In the current study the CCCU included 102 institutions in 30 states (15 institutions joined the CCCU in the intervening time period).

The data for this study were collected by using a survey instrument adapted from Taber (1989). The survey was initially administered by mail to each Director of Admissions at all 87 CCCU institutions in America in fall 1997. A second mailing was sent to those who did not respond to the first mailing. Overall, 69 of the 87 individuals responded to the two mailings, yielding a response rate of 79%. The same survey was administered once again in the current study to each Chief Enrollment Officer or Director of Admissions at all 102 American CCCU institutions. Overall, 65 of the 102 individuals responded to the e-mail and regular mail surveys, yielding a response rate of 64%. The institutions that responded in the current study do not necessarily match those from 1997 given the addition of 15 institutions to the CCCU during the time between the two studies.

Individual survey items were not used directly as independent variables, but rather the measure for enrollment management utilization was whether an enrollment management program was in place and if not, the length of time each component was in place. The length of time in place was defined as either not in place, in place for a short term (less than five years), or in place for a long term (more than five years). Five years was selected as the differentiator between short and long term since retention to graduation includes those who earn their degrees within six years from initial matriculation and thus a strategy must be in place for at least five years to have an influence on the graduation rate. The survey instrument contained 20 items: five for each of the first four

components. Respondents were asked to indicate how long each item had been in place by selecting either “0,” “<5 years,” or “>5 years.” A copy of the survey instrument is provided in the appendix.

For an institution to qualify as having an enrollment management program in place the “More Than Five Years” or “Less Than Five Years” response for length of time in place was required for at least three of the five items for each of the first four components as well as a “More Than Five Years” or “Less Than Five Years” response for the item addressing the Model of Coordination Component.

A more detailed methodology was used to categorize institutions at the component level. For an institution to qualify as having a particular long-term enrollment management component in place the “More Than Five Years” response for length of time in place was required for at least three of the five items for that component. An institution that did not qualify as having a particular long-term enrollment management component in place and did not have more than two out of five items with a response of “Not in Place” qualified as having a particular short-term enrollment management component in place. Institutions that did not qualify as having either a particular enrollment management component for a long or short term were considered as not having that particular enrollment management component in place.

Admissions yield, freshmen retention, and retention to graduation were used as measures of enrollment management utilization effectiveness. Admissions yield was defined as the percentage of new full-time undergraduate students who enrolled at the institution out of the total number who were accepted to attend that semester. Freshmen retention was defined as the percentage of second year undergraduate students currently enrolled full-time who were new to the institution the previous year out of the total number of students who were new full-time undergraduates the previous year. Retention to graduation was defined as the percentage of undergraduate students who earned their degree by the year of the study out of the number of students who were new to the institution in the fall six years prior (i.e., the percentage of students who earned their degree within six years of initial enrollment at the institution).

Descriptive statistics were used for Research Questions 1, 2 and 3. A multiple regression analysis was also conducted for Research Question 2 to see if any of the variance in having an enrollment management program in place could be explained by the admissions yield, freshmen retention or retention to graduation rates. For Research Question 4, a univariate analysis of variance was conducted to determine if there were significant differences for the utilization of each enrollment management component as measured by student recruitment and retention. This was done for each year in the study. In discussing the results, percents were used for survey responses instead of frequencies since the number of respondents differed in each year of the study (69 in 1997, 65 in the current study).

RESULTS

Research Question 1: What changes have occurred from 1997 to the present in CCCU member institutions having an enrollment management program in place?

Table 1 provides the change in enrollment management program utilization percentages. It is clear that more CCCU member institutions are implementing enrollment management programs given the decrease in percentage for "Not in Place."

Table 1: Enrollment Management Program Utilization by Percent

Enrollment Management Program	1997 (n = 69)	Current (n = 65)
In Place	46.4	60.0
Not in Place	53.6	40.0

Research Question 2: At CCCU member institutions, to what extent is the utilization of an enrollment management program related to student recruitment and retention for each year studied?

Table 2 shows the measures for student recruitment and retention based on whether an enrollment management program was in place. It is clear that the average admissions yield and freshmen retention rate decreased overall from 1997 to the current study while the average retention to graduation rate increased over the same period. The greatest change was in the retention to graduation rate for institutions without an enrollment management program in place.

Table 2: Student Recruitment and Retention by Utilization of Enrollment Management Program

	Student Recruitment and Retention					
	Admissions Yield		Freshmen Retention		Retention to Graduation	
Enrollment Management Program	M	SD	M	SD	M	SD
1997 Study						
In Place	49.0	13.6	78.8	7.6	52.1	13.6
Not in Place	52.6	16.9	74.3	8.0	48.8	14.0
Entire Population	51.0	15.4	76.4	8.1	50.4	13.8

Table 2: Student Recruitment and Retention by Utilization of Enrollment Management Program						
	Student Recruitment and Retention					
	Admissions Yield		Freshmen Retention		Retention to Graduation	
Enrollment Management Program	M	SD	M	SD	M	SD
Current Study						
In Place	47.6	12.9	73.3	10.7	54.2	11.8
Not in Place	46.8	11.8	74.0	9.6	54.6	11.0
Entire Population	47.3	12.2	73.6	10.4	54.4	11.6

The results of the hierarchical regression analysis are shown in Table 3. The variables were added in chronological order as listed in the data output. In the 1997 study only freshmen retention was a statistically significant predictor for enrollment management program utilization at the .05 alpha level (beta = 0.37, $p = .02$). Thus in the 1997 study there was a positive correlation between the utilization of an enrollment management program and freshmen retention. In the current study, none of the student recruitment and retention measures showed a statistically significant relationship with the utilization of an enrollment management program.

Table 3: Recruitment and Retention Measures Predicting Enrollment Program Utilization					
Variable	B	Std. Error	Beta	t	Sig.
1997 Study					
Admissions Yield	-.005	.004	-.148	-1.151	.255
Freshmen Retention	.022	.009	.373	2.389	.021*
Retention to Graduation	-.003	.006	-.097	-.621	.537
Current Study					
Admissions Yield	.003	.006	.078	.558	.579
Freshmen Retention	.001	.012	.011	.048	.962
Retention to Graduation	-.003	.010	-.063	-.268	.789
*$p < .05$					

Research Question 3: What changes have occurred from 1997 to the present in the length of time CCCU member institutions have had each of the five enrollment management components in place?

Table 4 provides a summary of the utilization for each of the five enrollment management components. The consistent decrease in not having an enrollment management component in place clearly indicates that there is an overall increase in the utilization of each component over time.

Table 4: Enrollment Management Component Utilization by Percent

	1997 (n = 69)			Current (n = 65)		
Component	Not[a]	< 5[b]	> 5[c]	Not[a]	< 5[b]	> 5[c]
Institutional Marketing	13.0	42.0	44.9	4.6	47.7	47.7
Admissions/Recruitment	18.8	42.0	39.1	6.2	53.8	40.0
Model of Coordination	21.7	43.5	34.8	4.6	52.3	43.1
Retention Programs	30.4	46.4	24.6	24.6	49.2	26.2
Planning	37.7	43.5	21.7	23.1	46.2	30.8

Note. Percents do not necessarily add up to 100 due to rounding.
[a]Not in place.
[b]In place less than five years. [c]In place more than five years.

The institutional marketing component was the most utilized in 1997 with 87% of the institutions having it in place. This increased to 95.4% in the current study. The model of coordination component experienced the greatest increase in implementation going from 78.3% in 1997 to 95.4% in the current study. Almost all institutions currently have the institutional marketing, admissions/recruitment, and model of coordination components in place.

The utilization of retention programs also increased over time, although to a lesser degree, from 69.6% utilization in 1997 to 75.4% in the current study. The least utilized component in 1997 was planning at only 62.3% of the institutions; however this figure did increase to 76.9% in the current study.

> Research Question 4: At CCCU member institutions, to what extent is the utilization of each enrollment management component related to student recruitment and retention for each year studied?

Only institutions with components in place for less than five years or more than five years were included in this analysis. This was necessary for both years of the study given the small number of institutions not having a particular enrollment management component in place. In the 1997 study, there was no significant difference in admissions yield or freshmen retention rate based on the utilization of enrollment management components. However, the interaction of having the retention programs and planning components in place for more than five years showed a significant

difference in the retention to graduation rate at the .05 alpha level (p = .04). The results of the univariate ANOVA for 1997 are shown in Table 5.

Table 5: Tests of Between-Subjects Effects for 1997 Retention to Graduation Rate

Source	Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	3732.895[a]	15	248.860	2.133	.105
Intercept	55272.843	1	55272.843	473.696	.000
IM	.511	1	.511	.004	.948
ADM/REC	374.401	1	374.401	3.209	.101
RET	2.014	1	2.014	.017	.898
PLAN	430.830	1	430.830	3.692	.081
COORD	273.234	1	273.234	2.342	.154
IM * ADM/REC	97.200	1	97.200	.833	.381
RET * PLAN	648.519	1	648.519	5.558	.038*
IM * COORD	7.468	1	7.468	.064	.805
ADM/REC * COORD	411.073	1	411.073	3.523	.087
RET * COORD	42.004	1	42.004	.360	.561
PLAN * COORD	10.195	1	10.195	.087	.773
Error	1283.525	11	116.684		
Total	78775.140	27			
Corrected Total	5016.420	26			

[a.] Squared = .774 (Adjusted R Squared = .395), *p < .05

Findings in the current study differed somewhat from those in the 1997 study. There was no significant difference in the freshmen retention rate based on the utilization of enrollment management components. However, the interaction of having the admissions/recruitment and model of coordination components in place for more than five years showed a significant difference in admissions yield at the .05 alpha level (p = .02). The results of the univariate ANOVA for admissions yield for the current study are shown in Table 6.

Table 6: Tests of Between-Subjects Effects for Current Study Admissions Yield					
Source	Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	3413.778[a]	18	189.654	1.434	.221
Intercept	42228.160	1	42228.160	319.196	.000
IM	19.295	1	19.295	.146	.707
ADM/REC	730.018	1	730.018	5.518	.030*
RET	.103	1	.103	.001	.978
PLAN	40.225	1	40.225	.304	.588
COORD	19.786	1	19.786	.150	.703
IM * ADM/REC	1.4445	1	1.4445	.011	.918
IM * RET	44.490	1	44.490	.336	.569
IM * PLAN	5.428	1	5.428	.041	.842
ADM/REC * PLAN	519.840	1	519.840	3.929	.062
RET * PLAN	3.578	1	3.578	.027	.871
IM * COORD	3.417	1	3.417	.026	.874
ADM/REC * COORD	805.151		805.151	6.086	.023*
IM * ADM/REC * COORD	137.069		137.069	1.036	.322
RET * COORD	29.838		29.838	.226	.640
PLAN * COORD	331.028		331.028	2.502	.130
Error	2513.613	19	132.295		
Total	92083.400	38			
Corrected Total	5927.391.420	37			
[a.] Squared = .576 (Adjusted R Squared = .174), *$p < .05$					

Having the model of coordination component in place for more than five years also showed a significant difference in the retention to graduation rate at the .05 alpha level ($p < .01$). The results of the univariate ANOVA for retention to graduation rate for the current study are shown in Table 7.

Table 7: Tests of Between-Subjects Effects for Current Study Retention to Graduation Rate

Source	Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	3899.671[a]	17	229.392	3.599	.006
Intercept	55339.440	1	55339.440	868.257	.000
IM	186.770	1	186.770	2.930	.105
ADM/REC	26.694	1	26.694	.419	.526
RET	7.229	1	7.229	.113	.740
PLAN	23.154	1	23.154	.363	.555
COORD	1040.263	1	1040.263	16.321	.001*
IM * ADM/REC	51.730	1	51.730	.812	.380
IM * COORD	.561	1	.561	.009	.926
ADM/REC * COORD	1.714	1	1.714	.027	.872
IM * ADM/REC * COORD	10.744	1	10.744	. 169	.687
RET * COORD	10.983	1	10.983	.172	.683
Error	1083.516	17	63.736		
Total	107616.390	35			
Corrected Total	4983.187	34			

[a.] Squared = .783 (Adjusted R Squared = .565), $*p < .05$

DISCUSSION

Enrollment managers at research universities report that handling enrollment strategies are among their top priorities (Hoover, 2006). Smaller institutions that do not have access to the same financial and human capital resources are in an even more tenuous situation as the competition for new students intensifies. The way that small private colleges, such as the member institutions of the CCCU respond in terms of the utilization of enrollment management strategies has implications for all institutions of similar size and character. More importantly, the results of their enrollment management efforts as measured by student recruitment and retention will verify the effectiveness of college student marketing practices.

Enrollment management is not a static concept that is stabilized once an enrollment management program is in place. It is recognized that the implementation of enrollment management is becoming more fluid as institutions need to respond quickly to changes in student enrollment (Black, 2004a). Moreover, there is a shift in enrollment management from rigid organizational structures to a more flexible organization where individuals and their corresponding departments change based on challenges and opportunities faced by the institution (Kalsbeek, 2001).

Perhaps the long-term identifier in this study (more than five years) does not apply to many institutions that are in a regular state of flux as they work through the process of finding the best way to make college student marketing via enrollment management operational on campus. This dynamic approach to enrollment management therefore, could be the result of trying to prioritize institutional efforts to maximize student recruitment and retention.

Enrollment Management Program

The lack of statistically significant findings for the utilization of an enrollment management program and measures of student recruitment and retention may be due to the small sample size. Regular changes in how enrollment management strategies are developed and implemented could also account for the lack of statistically significant findings in the current study. Other factors could explain the statistically significant findings in 1997.

In the current study, almost all the institutions had the institutional marketing (95.4%), admissions/recruitment (93.8%), and model of coordination (95.4%) components in place for either a short-term or long-term period of time. Thus, for the most part the utilization of these components did not separate the population into groups for enrollment management program utilization. As a result, in the current study differences in admissions yield based on enrollment management program utilization would likely not be noted.

Institutional Marketing and Admissions/Recruitment Components

Even though many institutions did not have an enrollment management program in place in 1997, 87.0% had the institutional marketing component and 81.2% had the admissions/recruitment component operational. Of the five components, these two likely make the greatest difference in admissions yield. Thus, since most institutions had them in place, regardless of whether they had an identifiable program in place, differences in admission yield are less noticeable.

In the current study there is a relatively even distribution of institutions having the model of coordination component in place for more than five years and for less than five years. At the same time there is a significant difference in admissions yield when the interaction of the admissions/recruitment and model of coordination components are considered. Thus the model of coordination component may act as a differentiator for student recruitment effectiveness. Those institutions that have a model of coordination in place for a long time may have more established admissions/recruitment strategies and thus the cumulative effect of these two components results in matriculating more students from the acceptance pool.

Retention Programs and Planning Components

The retention programs and planning components were utilized to a much lesser degree (69.6% and 62.3% respectively) in 1997. The influence of these components is reflected in the student retention measures as they focus on retaining students and long-term outcomes for the institution. Since it is the utilization of these components that separated the population into the groups "not in place" and in place for "less than five years" when it came to enrollment management program utilization, the statistically significant finding that relates enrollment management program utilization to freshmen retention makes sense.

One might expect an interaction effect between these two components in the current study as was the case in 1997. However, the increase in the utilization of the model of coordination component may partially explain the lack of significance in the findings. Although formal retention programs and planning activities may not be established, having a model of coordination in place suggests that these functions must be attended to at some level. Whether the responsibilities of enrollment management fall under a vice president or a staff coordinator, at least one person is considering the long-term viability of the institution. It is this concern that may account for the model of coordination having an influence on the retention to graduation rate in the current study.

Planning requires an institutional commitment since it usually is a function of the senior administration. This requires a significant investment in time and foresight regarding enrollment strategy from several individuals. Planning based on an institutional vision is less about what the organization is and more about what it aspires to be (Black, 2003). The challenge at most small campuses is setting a vision for the future when the need for recruiting more students to meet budgetary obligations is immediate. However, ignoring the long-term enrollment outlook only exacerbates the problem of just focusing on the next incoming class. It is a vicious cycle; since time must be spent on current recruitment efforts, there is no time to plan for the future, not planning for the future forces the institution to once again recruit for today, and on it goes. It is no surprise therefore that planning was the least utilized enrollment management component in 1997 and the second least utilized in the current study. However, the research and evaluation plan is essential in enrollment management (Henderson, 2005).

The retention programs component was also not utilized by as many institutions as institutional marketing, admissions/recruitment, and model of coordination. Since the survey was administered to the Director of Admissions or the Chief Enrollment Officer, it is possible that some respondents were not abreast of the retention programs in place at their campuses given that this function often resides with the student affairs staff. This component also requires the cooperation of many units on campus and therefore is also more challenging to implement. Given the focus on increasing student enrollment in the present, retention programs, which foster a more long-term approach to enrollment management, may not be viewed as the greatest priority. The implementation

of successful retention strategies remains a challenge for enrollment managers at most colleges and universities (Huddleston, 2000).

Model of Coordination Component

An interesting trend emerged regarding the model of coordination for enrollment management efforts. Over time there was a clear shift away from the not having any model of coordination in place to implementing an enrollment management committee or an enrollment management division. The committee is often the preliminary form of enrollment management organization and thus it is likely that some institutions that did not have any structure in place in 1997 began their organizational efforts by forming an enrollment management committee. However, the enrollment management division is quicker and easier to implement at smaller institutions given it involves moving less staff physically and administrators can take on a broader array of functions (Bontrager, 2004a). This fact is reflected in the increase in use of an enrollment management division from 30% of the colleges and universities in 1997 to 50% in the current study. The division model is also easier to adopt when an enrollment crisis is perceived on campus (Bontrager 2004a; Hossler, Bean & Associates, 1990). This increase in the utilization of the enrollment management division then may be an indication of the perceived enrollment situation at many CCCU member institutions.

There is also an increase in the retention to graduation measure in the current study based on the length of time an enrollment management model of coordination has been in place. Those institutions with a structure in place likely also have implemented strategies from the retention programs and planning components. Although there was no statistically significant finding, it is likely the effect of the model of coordination component working along with strategies from these two components that can account for the increase in student retention. Having a structure in place also enhances student retention efforts by bringing together the various units which have an influence on retention to the meeting table. Although there is finiteness to the particular model in place at any institution (Kurz & Scannell, 2006), institutions that have an enrollment management division in place (half of all CCCU schools in the current study) have the added benefit of accountability that accompanies the responsibility of a vice president appointment.

IMPLICATIONS

Enrollment managers are already aware of the rapidly changing landscape in college student marketing given the quick adoption of new technology, communication and heightened student expectations. Administrators at smaller colleges have the ability to respond more quickly than their counterparts at much larger institutions. Enrollment managers should leverage their advantage by being flexible in their marketing practices and organizational structures. The movement to an

Enrollment Management Division among smaller private colleges is clear and perhaps is necessary given the focus on efficiency and accountability. However, accurately assessing the needs, culture, and resources of a particular institution is warranted before making a major shift in how enrollment management strategy is executed.

A complete enrollment management program is comprised of individual strategies working together at the same time. Managers should review their enrollment efforts to assess whether they are utilizing the strategies needed to create synergy among them. More specifically, institutions should consider the impact of poor or non-existent institutional planning. It is a daunting task to focus on desired outcomes five or ten years into the future when current enrollments suggest a crisis is imminent. However, planning can bring various campus constituents together to focus on common goals and thus implement efficient strategies to reach them. Including the board of trustees in this process is prudent given the likelihood that financial support may be needed to carry the institution through an enrollment transition.

The results also suggest that enrollment managers should place a greater emphasis on retention programs since it is more cost effective to retain current students than to recruit new ones. Increased retention eases the burden of admissions professionals at smaller institutions that would otherwise be forced to focus on the quantity of applicants and matriculates rather than the best fit for the institution and those who attend. An added bonus comes from current students who are satisfied with the college or university in that they can also act as institutional advocates by relaying positive messages to family and friends as well as prospective students.

This study highlights the institutional focus of enrollment management strategies at the program and component level. Almost all institutions in this study utilize the strategies in the institutional marketing, admissions/recruitment, and model of coordination components. There is a clear trend toward the adoption of the retention programs and planning components as well. The length of time these components are in place has a positive influence on student recruitment and retention. The results of this study could be used as justification to initiate enrollment management implementation for CCCU member institutions that do not have an enrollment management program or certain components in place.

LIMITATIONS AND RECOMMENDATIONS FOR FUTURE RESEARCH

There are a few limitations associated with this work. There are many colleges or universities that have characteristics similar to those of the CCCU and therefore may also find the results applicable to their institution. However, the profile of member schools should be kept in mind when linking the results of this research with the situation found on other college campuses.

This study did not differentiate the effectiveness of each of the five models of coordination in enrollment management in terms of student recruitment and retention. Rather, it strictly focused on whether or not there was a model of coordination in place. Also, given the high turnover in this

line of work (Gyure & Arnold, 2001), the institutional knowledge of the survey respondents may be limited and thus can influence the responses regarding the length of time a particular enrollment management strategy has been utilized. Finally, respondents identified the length of time each enrollment management strategy was in place as "more than five years" or "less than five years" as opposed to a specific number of years and months. This eased the burden to remember a specific time frame but likely compromised the robustness of the analysis somewhat since 4.7 years and 4.9 years were grouped in the same category yet 4.9 years and 5.1 years, having the same time distance interval, were placed in separate categories.

This longitudinal study provided a wealth of data for college student marketers and enrollment managers at CCCU member institutions. The results demonstrate that small private colleges are continuing to implement enrollment management strategies and the benefits of their implementation is reflected in increased measures of student recruitment and retention. This supports the results of McGrath (2002) who found that the majority of respondents to his survey on marketing practices in higher education reported that they believe marketing efforts are critically important to the future of their institution. This study also substantiates the concern of respondents who indicated that their institutions did not devote enough resources to marketing efforts.

A consideration for future research is to include an examination of more recent strategic developments in enrollment management such as data mining (Antons & Maltz, 2006), forecasting (Ward, 2007), predictive modeling (Jones & Vaiciulis, 2007), and electronic communications (Zalanowski, 2007). Future studies could also investigate the relationship between college student marketing via enrollment management strategy utilization, cost of attendance, and student recruitment and retention. Expanding the study to include non-CCCU member institutions will enhance the generalizability of the findings and will provide a more comprehensive picture of college student marketing practices. The implications would be significant for institutional leaders who are considering adoption or further implementation of college student marketing activities or enrollment management practices.

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APPENDIX
ENROLLMENT MANAGEMENT STRATEGIES
AT
CCCU MEMBER INSTITUTIONS

QUESTIONNAIRE

Enrollment management is a systematic and active process by which an institution can control its enrollment levels. It involves the efforts of many different components of a college and is ideally tailored to the needs of one specific institution. Research is being conducted at CCCU member institutions to investigate the relationship of the level of involvement in enrollment management strategies to student recruitment and retention. It is also hoped that the results of this research will aid practitioners in their future decisions regarding enrollment management.

Please take some time now to fill out this brief questionnaire. Your institution and all of your responses will be kept **confidential**. Your participation is voluntary.

PART I

Please indicate whether or not the following Enrollment Management Strategies are presently in place at your institution, and if so for how long, by **circling** the appropriate response.

	STRATEGY		LENGTH OF TIME IN PLACE		
			Not in place	**Less than five years**	**More than five years**
1.	Conduct internal institutional research to identify unique institutional characteristics.		0	<5	>5
2.	Conduct research to identify characteristics of students who choose to attend your institution.		0	<5	>5
3.	Conduct research to identify the decision factors currently enrolled students used in deciding to attend your institution.		0	<5	>5
4.	Use a variety of marketing techniques to recruit students from different market segments.		0	<5	>5
5.	Have a clear delineation of primary and secondary feeder markets.		0	<5	>5
6.	Invest financial resources in activities designed to attract more applicants.		0	<5	>5
7.	Increase need-based financial aid for specific target student markets.		0	<5	>5
8.	Actively recruit non-traditional students based on age or some other criteria.		0	<5	>5
9.	Conduct regular evaluation of all recruitment materials in print as well as other media.		0	<5	>5

	STRATEGY	LENGTH OF TIME IN PLACE		
		Not in place	**Less than five years**	**More than five years**
10.	Seek input from currently enrolled students in the evaluation of the recruitment process.	0	<5	>5
11.	Have differing orientation programs for transfers, freshmen, and non-traditional students.	0	<5	>5
12.	Have a formal documented retention program.	0	<5	>5
13.	Conduct exit interviews, and analyze and share collected data within the institution.	0	<5	>5
14.	Have person(s) responsible specifically for the coordination of retention efforts.	0	<5	>5
15.	Utilize an early alert system to identify students at risk of leaving.	0	<5	>5
16.	Critically examine the institutional mission as a basis for strategic planning.	0	<5	>5
17.	Have a specified documented two to three year plan for enrollment management.	0	<5	>5
18.	Examine the curriculum annually with regard to meeting the needs and interests of prospective students.	0	<5	>5
19.	Conduct an annual evaluation of the effectiveness of enrollment management.	0	<5	>5
20.	Have mechanisms in place to disseminate research data to decision makers.	0	<5	>5

PART II

21. There are many ways to coordinate efforts of an enrollment management program. Listed below are four of the most prominent means of coordination and two additional alternatives. Please place an "x" by the **one** that most closely reflects what exists on your campus **and** circle the response that indicates for how long in years.

____ **A. Marketing Committee** – Comprised of both faculty and administrators, the committee analyzes relevant data and advises the college regarding enrollments. It works within the existing structure and has a direct role in decision making. 0 <5 >5

____ **B. Staff Coordinator** – A newly created position such as Dean of Enrollment Management. This person is responsible for coordinating all enrollment management efforts as well as developing and implementing an enrollment management program. The key here is coordination, the Staff Coordinator does not directly supervise the heads of all the components, but coordinates their efforts. 0 <5 >5

____ **C. Matrix System** – Enrollment related functions are regrouped and their efforts are overseen by a senior administrator. This links enrollment activities across academic and administrative lines. 0 <5 >5

____ **D. Enrollment Management Division** – A major restructuring within the institution so that a new division is created placing all enrollment management related components under the direct supervision of a vice-president. The new division is committed to enrollment management and institutional advancement. 0 <5 >5

____ **E. None** – Enrollment management efforts are not currently coordinated at our institution.

____ **F. None of the Above** – Reflect how enrollment management is coordinated at our institution.

If you marked **F**, then please give a brief description of how your enrollment management efforts are coordinated and how long they have been coordinated this way. 0 <5 >5

PART III

22. Please state your admissions yield for Fall of 2004 as a percent to one decimal place ___

    Admissions yield is defined as the percentage of new full-time undergraduate students enrolled at your institution in the Fall of 2004 out of the total number who were accepted to attend that semester.

23. Please state your freshmen retention rate for Fall of 2004 as a percent to one decimal place ___

    Freshmen retention rate is defined as the percentage of second year undergraduate students currently enrolled full-time in the Fall of 2004 who were new to the institution in the Fall of 2003 out of the total number of students who were new full-time undergraduates to the institution in the Fall of 2003.

24. Please state your retention to graduation rate for Spring 2004 as a percent to one decimal place ___

    Retention to graduation rate is defined as the percentage of undergraduate students who earned their degree by the Spring of 2004 out of he number of students who were new to your institution in the Fall of 1998 (i.e., earned their degree within six years of initial enrollment at your institution).

RELATIONSHIP BETWEEN CONSUMER PERSONALITY AND BRAND PERSONALITY AS SELF-CONCEPT: FROM THE CASE OF KOREAN AUTOMOBILE BRANDS

Jung Wan Lee, Boston University

ABSTRACT

This study examines relationships between consumer personality and brand personality as the self-concept of consumers and explores applications to branding strategies in consumer markets. Examples of the Korean automobile brands illustrate the key role of brands' personality as differentiators. This argues the case for managing these across the spectrum of marketing communications devoted to brand images. Quantitative research is applied with data collected from automobile consumers in South Korea. The data is analyzed using factor analysis, structural equation modeling method and ANOVA. A conceptual framework was developed to explain the effect of brand identification on brand purchasing. The important variables of this framework included the work-hard, positive and adventure constructs of consumer personality, and the upscale and honest constructs of brand personality. The empirical results indicate there are positive relationships between consumer personality and brand personality as the self-concept. These relationships had a statistically significant effect on consumers' identification with a brand.

INTRODUCTION

A consumer is an individual with a distinctive personality. The term “personality” refers to the unique psychological characteristics eliciting consistent and lasting responses to one’s own environment. Therefore, personality can be useful in analyzing an individual consumer’s responses to certain products or brands. Brands provide different types of benefits to consumers. A major distinction is often made between three basic categories of benefits: (1) functional, (2) experiential, and (3) symbolic brand benefits (Park et al., 1986; Keller, 1993, 1998). Symbolic benefits refer to the signal effect of using a brand, which is what the brand says about the consumer to the consumer and to others. The signal effect of a brand can be based on the image of a generalized user of the brand and/or the personality of the brand itself. When using a brand, consumers become associated with these signals. A user of a product or retail brand can be personally associated with a brand's particular image through its usage.

Focusing on symbolic brand benefits, two streams of research are found in the literature: (1) self-congruity research (e.g. Sirgy et al., 1991), and (2) brand personality research (e.g. Aaker, 1997). Self-congruity is how much a consumer's self-concept matches the personality of a user of a brand. Brand personality is defined as the set of human characteristics associated with a brand (Aaker, 1997). Brand personality symbolizes the specific mix of human traits that are attributed to a particular brand. Aaker (1997) found that a number of well-known brands tended to be strongly associated with one particular trait. Hence these brands will attract consumers who posses the same personality traits. Harris and DeChernatony (2001) proposed that brand personality was one component of brand identity.

Many marketers have applied the personality related concept of a person’s self-image or self-concept in their research (for example, Aaker, 1999; Azoulay & Kapferer, 2003; Govers & Schoormans, 2005; Sirgy et al., 1997). The self-concept is based on the premise that people’s possessions contribute to and reflect their identities. Thus, in order to understand consumer behavior, the marketer must first understand the relationship between consumers’ self-concept and their possessions.

Marketing managers have long sought to differentiate their brands from others as a means of achieving competitive advantage. Traditionally, these brand-personality strategies centered on products or services and the corresponding functional or utilitarian benefits those products or services provide. In recent decades, however, the number of brands has proliferated and competition has intensified, making it difficult for managers to differentiate brands on the basis of functional attributes alone. As a result, symbolic meanings increasingly form a basis for brands' positioning and differentiation. There are frequent efforts by marketers to create meaningful and distinctive brand personalities in the minds of consumers.

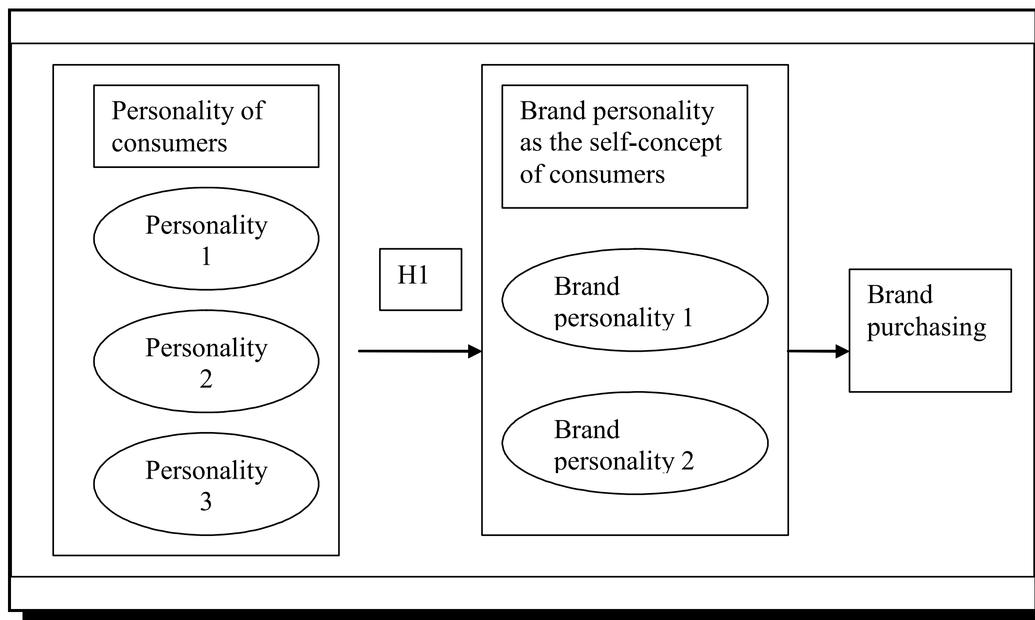
Therefore, the development of a clearly defined brand personality can be an important objective of brand management. Although the automobile industry in Korea spends millions of dollars each year on advertising to build and maintain brand image, the author has found little research directed toward either determining automobile brand personalities or examining the extent to which brands are differentiated on personality dimensions. This study seeks to provide empirical evidence regarding the extent to which automobile brands of Korea have established clear and distinct brand personalities in the minds of consumers. In this study, the author measures the brand personalities of five manufacturers in the Korean automobile industry representing two segments: functional utilitarian owners and upscale symbolic owners.

This paper argues that in the development of advertising and in the measurement of the effects of advertising, a great deal of attention should be paid to the content of a brand's messages - brand image and brand personality. The relationship concept is defined as the interaction between consumers' personality toward the brand, and the brand's personality toward the consumer. It is argued that the development of a successful consumer-brand relationship depends crucially on the

consumer's perceptions of the brand's personality. It is a common experience, however, that neither of these adequately represents the totality of a brand's relationship with the consumer.

This paper includes examples of Korean automobile brands illustrating the key role of brands' personality as differentiators and argues the case for managing these across the spectrum of brand communications with the same attention normally devoted to brand images. There is significant empirical evidence that many consumers enjoy the challenge of purchasing a brand that matches well with their own values and personalities (for example, Kim, Lee & Lee, 2008; Ko et al., 2008). Therefore, it is said that the personality of consumers impacts the final selection of a brand and represents the self-concept. Accordingly, this study focuses on it in two ways: first, consumers are inclined to purchase a brand or a product that reflects their own personalities; second, consumers tend to choose a brand that promotes self-concept. Therefore, the objective of this study is to investigate empirical evidence of the relationship between consumers' personality and brand personality as the self-concept of consumers.

Figure 1: Research Framework



LITERATURE REVIEW AND HYPOTHESIS FORMATION

Consumer's Personality

Personality refers to the unique psychological characteristics that lead to relatively consistent and lasting responses to one's own environment. Different personality theories have been developed

over the years to explain the structure, process and development of human behavior. Among these personality theories, the trait theory tends to place a great emphasis on exploring the basic structure of personality. Trait theory assumes that people possess broad predispositions that cause them to behave in a particular way. There has been growing agreement among personality researchers that there are five basic dimensions of personality.

These traits, known as the Big-Five (Costa & McCrae, 1992a; 1992b), are extroversion, agreeableness, conscientiousness, neuroticism, and openness to experience. Extraversion refers to the tendency to experience positive emotional states and feel good about oneself and the world around one. Agreeableness is the tendency to get along well with others. Conscientiousness is concerned with the extent to which a person is careful, scrupulous, and persevering. Neuroticism refers to the tendency to experience negative emotional states and view oneself and the world around one negatively. Openness to experience is concerned with the extent to which an individual is original, open to a wide variety of stimuli, has broad interests and is willing to take risks.

Brand Image and Personality

Brand image can be defined by saying that it is a concept of a product held by the customer, based on reason and emotion that is subjective and perceptual, with perception being more important than reality. Brand image represents the total set of brand related activities engaged by a firm. Nandan (2005) asserted that, while the other components such as brand vision, brand culture and brand positioning contributed to the overall identity that a firm sought to propagate, consumers would form their own opinions of a brand and would express this as brand image. Brand image is, therefore, viewed as the outcome of a dialogue between marketers and consumers. More recently, brand images are increasingly viewed as a form of personal statements. For example, clothing, perfume, and cars are the most frequently mentioned products that consumers use as means of self-expression. However, since a much wider variety of products have a brand or user image associated with them, the associations of a brand user with brand image may affect consumers' brand choice, especially when many other individuals observe the brand consumption.

Many researchers have attempted to explore the meaning of brands by examining how brand personality attributes are structured (e.g; Azoulay & Kapferer, 2003; Bosnjak et al., 2007; Kim et al., 2007; Kim & Jia, 2005; Kim, Lee & Lee, 2008; Ko et al., 2008; Moon, 2007). Exploratory and confirmatory factor analyses yielded a perceptual space for individuals comprising five dimensions (Aaker, 1997): sincerity, excitement, competence, sophistication, and ruggedness. Sincerity comprises brand personality characteristics like domestic, honest, and genuine. Excitement consists of characteristics like exciting, trendy, spirited, and up-to-date. Competence includes characteristics such as reliable, responsible, and efficient. Sophistication is characterized by pretentious, glamorous and charming. Ruggedness incorporates characteristics of tough, strong, and outdoorsy.

However, cross-cultural research on brand personality employing Aaker's (1997) approach resulted in considerable differences among cultures, with respect to the number of dimensions extracted and their meaning (Aaker et al., 2001; Austin et al., 2003; Kim, Lee & Lee, 2008; Ross, 2008; Smit et al., 2003; Sung & Tinkham, 2005). For example, Ross (2008) examined Aaker's brand personality scale in the context of sport industry and suggested that the brand personality scale was not fully applicable to the area of the sports and further development of the scale was needed in order to improve the reliability and validity.

Many researchers proposed a brand concept scale consisting of the following three brand sub-concepts: functional, symbolic, and experiential. Park et al., (1986) had demonstrated that the "functional" concept could be applied to differentiate both brands and products. Beyond utilitarian and experiential attributes, many researchers (e.g.; Kim et al., 2007; Kim, Lee & Lee, 2008; Ko et al., 2008; Lee & Tai, 2006; Moon, 2007; Wysong et al., 2002) found that brands are significant as consumption symbols, stressing their capacity to fulfill symbolic or value expressive functions for the individual. "Symbolic" represents the concept that one can express oneself with the brand of product one uses. In turn, the brand of products or companies that one uses will signal to others about one's social status. Research on the symbolic use of brands has shown that consumers preferred those brands that matched well with their own personality (Govers & Schoormans, 2005).

Brand Personality as the Self-Concept of a Consumer

The congruity between self-concept and brand image has been frequently studied and theorized about this effect on consumer behavior. Self-congruity theory proposes that part of consumer behavior is determined by an individual's comparison of the image of themselves and the image of a brand, as reflected in a stereotype of a typical user of the brand (Sirgy et al., 1997). The findings from this area of research indicate that consumers often have a preference for and choose products and brands that have higher versus lower levels of congruity. Self-congruity has been used to explain and predict brand attitude, product use and ownership, brand loyalty, purchase intention, and so forth (Sirgy et al., 1997)

Two basic driving forces can be seen at work in the self-concept aspect of self-congruity. Individuals are either trying to preserve self-concept via self-consistency motivation or enhance self-concept via self-esteem motivation (Hong & Zinkhan, 1995). Traditional self-congruity measurement consisted of a two-step procedure. First, respondents rated a brand with respect to a set of specified image characteristics for a typical user of the brand. This is called the product-user image. Next, the self-concepts of respondents were rated with respect to the same characteristics. Congruity is estimated by computing a discrepancy ratio for each characteristic, and then summing across all characteristics.

As noted, brand personality is defined as the set of human characteristics associated with a brand. These characteristics could be such traits as outdoorsy, sporty, or youthful. Aaker proposed

that even though there might be similarities between the brand personality framework and human personality dimensions, '... brand personality dimensions might operate in different ways or influence consumer preference for different reasons' (Aaker, 1997, p.353). Aaker notes that one reason for the weak findings in self-concept research is the asymmetric relationship in the structure of brand versus human personality.

Aaker (1997) categorizes the various sources that contribute to the formation of a brand personality as 'direct' and 'indirect' sources. Brand user image, the basis for self-concept assessment, is but one of several 'direct' variables that go into the formation of a brand personality. Thus, it can be seen that brand personality is a broader, more inclusive concept than the image of a typical user that is employed in self-concept assessment. The image of the typical user of a brand is but one of several 'direct' sources of brand personality formation. Further, brand personality formation also includes 'indirect' sources as noted. Another distinction in the measurement of brand personality and self-concept is that, as self-concept has been conceptualized and traditionally measured, there is indirect indication of the actual personality/image of the brand. That is, the personality of the brand is indicated vicariously through the personality characteristics of a typical user of the brand. The personality/image of a typical user of the brand is believed to be reflective of the brand. The brand is believed to be imbued with the personality of a typical user.

Examination of self-concept versus brand personality measures and measurement procedures identifies some important differences (see Aaker, 1997; Sirgy et al., 1997). Though evaluations of personality characteristics of a typical brand may sometimes lead to comparisons with a respondent's own self-concept, especially if the respondent is a user of the brand, the self-concept is probably more implicitly or indirectly involved in the brand personality measurement process than with the self-concept measurement process. With brand personality measures, the main focus of attention is toward the personality of the brand, without the direct connection to the self of the respondent as is found in self-concept measures.

Consumer’s Personality and Brand Personality

Empirical research in the fields of consumer psychology and marketing has extensively shown that by purchasing and utilizing certain brands, consumers are inclined to maintain and enhance social approval of certain aspects of self-concept (Govers & Schoormans, 2005; Hayes et al., 2006; Kim, Lee & Lee, 2008; Lee & Tai, 2006; Moon, 2007; Wysong et al., 2002). Hayes et al. (2006) suggested that perceived attractiveness significantly influenced the consumer-brand relationship development process in meaningful and predictable ways. Results indicate that consumer perceptions regarding a product brand's possession of certain personality traits can influence their opinion of the desirability of the brand as a relationship partner, and that the brand personality-partner quality connection depends, to a degree, on the brand's perceived attractiveness.

After Aaker proposed that the company's image, logo, packaging and celebrity endorser might be antecedents in creating such brand personality, Wysong et al. (2002) have explored the antecedents and consequences of brand personality. As for the consequences of brand personality, Siguaw et al. (1999) found that a well-established brand personality could result in increased preference and usage, higher emotional ties to the brand, trust and loyalty. Freling and Forbes (2005) also suggested that brand personality had a positive influence on product evaluations and that subjects exposed to a brand's personality had a significantly greater number of brand associations. In particular, Govers and Schoormans (2005) suggested that consumers tended to prefer products with a product personality that matched his/her own self-image. Furthermore, Filo et al. (2008) supported that brand trust mediated the link between brand loyalty and the management and popularity of the managed brands. They asserted that brand managers worked to leverage brand trust through social responsibility, consumer satisfaction and quality customer service in an effort to increase consumer brand loyalty.

In short, consumers are more likely to hold favorable attitudes towards those brands that match their own personality and will most probably purchase those brands matching well with their personality. For example, Matzler et al. (2006) found that extraversion and openness were positively related to hedonic product value; and that the personality traits directly (openness) and indirectly (extraversion, via hedonic value) influenced brand effects, which in turn droved attitudinal and purchase loyalty. Based on the above discussion, the following hypothesis is proposed:

Hypothesis: *The personality of a consumer is related to brand personality as the self-concept of the consumer.*

METHODOLOGY

Survey and Sample Characteristics

A questionnaire was developed for collecting empirical measures of personality traits and brand personality variables. A survey was conducted to online access panel members through the Internet in South Korea. In total, 500 respondents completed the questionnaire and were considered as useable. Of these respondents, 59 percent were male. Of these respondents, 27 percent aged 20-29, 38 percent aged 30-39, and 22 percent aged 40-49 years old. About 70 percent of these respondents had junior college or university education. More than 54 percent of them have been employed full time for longer than 1 year in various industries. The average income per capita for these respondents is 1900 US dollars per month, which is slightly higher than the average income per capita of 1700 US dollars per month for Korean employees in 2007, see Table 1 for details.

Table 1: Characteristics of Samples			
Sample characteristics		N	%
Sex	Male	297	59
	Female	203	41
Age	Below 19 years old	18	4
	20-29	137	27
	30-39	191	38
	40-49	109	22
	Over 50 years old	45	9
Monthly Income	Less than USD1000	76	15
	USD1001-2000	146	29
	USD2001-3000	131	26
	USD3001-4000	72	14
	USD4001-5000	50	10
	More than USD5001	25	5
Education	Secondary (high school)	149	30
	Junior college	83	17
	University	246	49
	Graduate	22	4
Work	Company employee	272	54
	Self-employed	47	9
	Civil servant	27	5
	Professional	44	9
	Student	41	8
	Housewives	36	7
	Not employed	18	4
	Freelancer (part-time employed)	9	2
	Other	6	1

Measurements

Personality constructs were measured using the Five-factor Inventory (NEO-FFI) scale developed by Costa and McCrae (1992a; 1992b). This original instrument had twelve items for each of the five personality dimensions that add up to a total of 60 items. Since a web-based survey

questionnaire of 60 items would be too lengthy as well as too time-consuming to be completed by respondents, a total of 30 items instead of 60 items were actually utilized. Respondents indicated how much they possessed the personality traits described by each objective item. The seven-point semantic differential scale was the format of responses, for example, from 1 indicating not agreed to 7 for most agreed.

Brand personality was measured using 17 items that were developed by Aaker (1997). The response format for each of these items was a seven-point scale, that is, from 1 for disagreed to 7 for a strongly agreed response. To insure the minimization of idiomatic wording, all of the instruments were first translated into Korean, and then results were checked and translated back to English by the author.

Factor Analysis and Reliability Test

Factor analysis with a varimax rotation procedure was employed to identify underlying dimensions of the personality of consumers. Then, a reliability test was used to test internal consistency for extracted constructs. As shown in Table 2, an exploratory factor analysis with a varimax rotation for consumer personality yielded four factors based on an eigenvalue cut-off of 1. The sums of squared loadings from the four-components have the cumulative value of 57.766 percent in explaining the total variance in the data. The four components of consumer personality are named as "work-hard," "positive," "skeptical," and "adventure," respectively. To test the appropriateness of factor analysis, two measures were used. The Kaiser-Meyer-Olkin (KMO) overall measure of sampling adequacy (MSA) was 0.832, which falls within the acceptable level. In addition, the Bartlett's test of sphericity was 4325.797 df=190, significant at p= 0.000 which showed a significant correlation among the variables.

Further scale refinement was done by examining corrected item-total correlation to improve the reliability. This led to the retention of 16 items, which represented the four dimensions; "work-hard" (6 items, α = 0.877); "positive" factor (4 items, α =0.875); "skeptical" factor (4 items, α =0.772); and "adventure" factor (2 items, α =0.617), respectively.

Again, the principal components analysis procedure was applied to transform the 17 items of brand personality into new sets of linear combinations. As shown in Table 3, an exploratory factor analysis with a varimax rotation for brand personality yielded two factors based on an eigenvalue cut-off of 1. The sums of squared loadings from the two-component have the cumulative value of 61.244 percent in explaining the total variance in the data. The two components of brand personality are named as "upscale" and "honest" respectively. To test the appropriateness of factor analysis, two measures were used. The Kaiser-Meyer-Olkin (KMO) overall measure of sampling adequacy (MSA) was 0.925, which falls within an acceptable level. In addition, the Bartlett's test of sphericity was 5178.623 df=120, significant at p= 0.000 which showed a significant correlation among the variables.

Table 2: Results of Factor Analysis and Reliability Test for Consumer Personality Scale						
Items	Factor loadings	Eigenvalue	Extracted variance	Factor name	Corrected item-total correlation	α
Follow through	0.826	4.983	19.915%	Work-hard	0.738	0.877
Perform tasks conscientiously	0.792				0.737	
Strive for excellence	0.791				0.687	
Productive person	0.782				0.668	
Work with clear goals	0.757				0.667	
Get things done on time	0.67				0.599	
Rarely feel fearful	0.86	3.354	16.771%	Positive	0.784	0.875
Not worrisome	0.853				0.782	
Seldome depressed	0.839				0.732	
Rarely feel blue	0.772				0.629	
Cold and caculating	0.818	2.456	12.278%	Skeptical	0.68	0.772
Selfish and egotistical	0.77				0.551	
Arguments with co-workers	0.752				0.538	
Cynical and skeptical	0.701				0.532	
Try new things	0.733	1.76	8.802%	Adventure	0.418	0.617
Intellectual curiosity	0.719				0.447	
Total variance			57.766%			
Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.						

Further scale refinement was done by examining corrected item-total correlation to improve the reliability. This led to the retention of 11 items, which represented the two dimensions; "upscale" factor (7 items, α = 0.916) and "honest" factor (4 items, α = 0.794), respectively.

Measurement and Structural Model

The Analysis of Moment Structures (AMOS: Arbuckle, 1994) was used for an empirical testing of the model, and the Maximum Likelihood Estimation (MLE) was applied to estimate numerical values for the components in the model. To diagnose the presence of distribution problems in the data and to gauge their effects on parameter estimates, bootstapping (Efron, 1987; Stine, 1989) method was used and 300 bootstrap replications were obtained. Confirmatory factor

analysis was employed to test the validity of the scales in measuring specific constructs of the measurement model and Fornell and Larker's (1981) guidelines were applied.

Table 3: Results of Factor Analysis and Reliability Test for Brand Personality Scale

Items	Factor loadings	Eigenvalue	Extracted variance	Factor name	Corrected item-total correlation	α
Wealthy/rich	0.863	6.289	39.304	Upscale	0.804	0.916
Successful	0.859				0.801	
Upper class	0.853				0.759	
Charming	0.739				0.728	
Competent	0.731				0.701	
Powerful	0.709				0.723	
Confident	0.683				0.686	
Honest	0.76	3.51	21.94	Honest	0.699	0.794
Cheerful	0.73				0.501	
Reliable	0.66				0.658	
Spirited	0.648				0.559	
Total variance			61.244%			

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.

To diagnose possible identification problems, the degree of freedom with large standard error variances (Bollen & Joreskog, 1985) was used. Any identification problem was remedied according to Hayduk's (1987) study. To evaluate the overall goodness-of-fit of a proposed model, the criteria suggested by Bollen (1989, p.275) were used and measures were selectively assessed as of the following: Chi-square statistic (CMIN), degrees of freedom (DF), CMIN divided by DF (CMIN/DF), goodness of fit index (GFI), adjusted goodness of fit index (AGFI), normed fit index (NFI), and root mean square of approximation (RMSEA).

RESULTS OF HYPOTHESIS TEST AND DATA ANALYSIS

The results of the data analysis generally achieved an appropriate parsimony model (Chi-square= 1637.304, d.f.=319, CMIN/DF= 5.289). But to some extent, the model has relatively poor goodness-of-fit measures, in particular, the indices of GFI (0.778), AGFI (0.737), NFI (0.784), and RMSEA (0.088). The GFI of 0.778 describes that the goodness of fit of the model indicates about 78 percent fit. The NFI of 0.784 describes that the fit of the proposed model is about 78 percent

closer to the fit of the saturated model (the perfectly fitting model). Note that values of the GFI and AGFI can vary from 0 to 1, with values above 0.90 considered as good and values from 0.80 to 0.90 considered as moderate (Bentler & Bonett, 1980). For NFI, the closer its values to 1, the better are the fitness of the hypothesized model over the null model. Note that a value of about 0.08 or less for the RMSEA would indicate reasonable error of approximation (Browne & Cudeck, 1993).

Many fit measures represent an attempt to balance between parsimonious and well fitting model, that is, two conflicting objectives - simplicity and goodness of fit. Steiger (1990) stated that "in the final analysis, it may be impossible to define one best way to combine measures of complexity and measures of badness-of-fit in a single numerical index, because the precise nature of the best numerical tradeoff between complexity and fit is a matter of personal taste. The choice of a model is a classic problem in the two dimensional analysis of preference" (p.179). This study seeks the grounds for preferring a simple, parsimonious model instead of complex ones. At the same time, a well fitting model is preferable to poorly fitting ones.

Null hypothesis 1a, "*the consumer personality has no relationship with the upscale concept of brand personality*," was empirically tested. The results show that causality relationships between "work-hard," "positive," "adventure" of consumer personality and the upscale concept of brand personality are statistically significant ($p < 0.05$), as shown in Table 4 and Figure 2. This suggests that the personality of consumers has related to a selection of a brand identity that represents the self-concept of oneself.

Null hypothesis 1b, "*the consumer personality has no relationship with the honest concept of brand personality*," was empirically tested. The results of data analysis show that causality relationships between "work-hard," "positive," "skeptical," "adventure" of consumer personality and the honest concept of brand personality are statistically significant ($p < 0.05$). However, the causality relationship between the "skeptical" of consumer personality and the honest concept of brand personality show a negative effect. That is, the higher representing "skeptical" consumers, the less concerning "honest" concept of brand personality. Overall, the results of the hypothesis test suggest that the personality of consumers can be utilized to better communicate to differentiate brand benefits and brand identity.

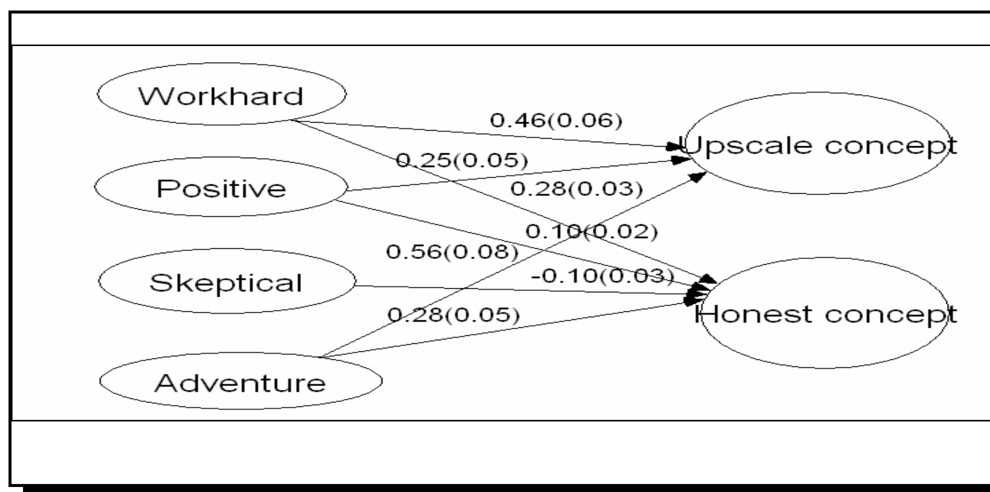
Table 4: Outputs of Structural Equation Model (SEM) Estimates

Path diagram			Proposed model	Bootstrap#
Consumer personality constructs		Brand personality constructs	Standardized Estimate(S.E.)	Standardized estimate (bias)
Work hard	à	Upscale concept	0.465(0.063)***	0.454(-0.011)
Positive	à	Upscale concept	0.249(0.052)***	0.244(-0.005)
Skeptical	à	Upscale concept	0.074(0.069)	0.072(-0.002)
Adventure	à	Upscale concept	0.563(0.088)***	0.603(0.040)

Table 4: Outputs of Structural Equation Model (SEM) Estimates				
Path diagram			Proposed model	Bootstrap#
Consumer personality constructs		Brand personality constructs	Standardized Estimate(S.E.)	Standardized estimate (bias)
Work hard	à	Honest concept	0.280(0.038)***	0.279(-0.001)
Positive	à	Honest concept	0.103(0.026)***	0.100(-0.003)
Skeptical	à	Honest concept	-0.099(0.035)**	-0.102(-0.003)
Adventure	à	Honest concept	0.279(0.048)***	0.305(0.026)

** p<0.05, *** p<0.001 statistically significant at α=0.05 with 95% confidence interval
# 300 usable bootstrap resample were analyzed.
Fitness measures: Chi-square=1637.304, df=319, CMIN/DF= 5.289, RMSEA=0.088,
GFI=0.778, Adjusted GFI=0.737, NFI=0.784

Figure 2: A Structural Equation Model with Standardized Estimates



For purposes of examining differences across brands of Korean cars, the author compared the means of the ratings for the five automobile manufacturers within each class (There are five automobile manufactures in Korea: Hyundai, Kia, Daewoo, Samsung, and SSangyong). The results of ANOVA suggest that there are significant differences in the mean values of "upscale" dimension of brand personality (F =3.019, p=0.018) among automobile manufacturers, see Table 5 for details. For the other dimension of brand personality, that is, "honesty," the data show that there are no significant differences in their mean values by automobile manufacturers.

Table 5: ANOVA Outputs of Brand Personality by Korean Automobile Manufacturers

Dimensions	Firm-A	Firm-B	Firm-C	Firm-D	Firm-E	Total	F
Upscale	4.827# (1.224)	4.480 (1.212)	4.895 (1.124)	4.412 (1.149)	4.932 (1.242)	4.709 (1.190)	3.019**
Honesty	5.180 (1.080)	5.071 (1.175)	5.291 (1.019)	4.900 (0.989)	5.000 (1.111)	5.088 (1.075)	0.546
% of brand preference	57.2%	20.3%	4.3%	10.8%	7.3%	100%	

**p<0.05
Means (Standardized Deviation)

As shown in Table 5, for the "upscale" construct of car brand personality, there are significant mean differences between Firm-B (Mean B = 4.480) and Firm-C (Mean C = 4.895), and between Firm-D (Mean D = 4.412) and Firm-C (Mean C = 4.895), respectively. When respondents are grouped according to the dimensions of car brand personality, they show a preference for different brands. For example, a larger group of the respondents, who appreciate positively E-firm's brand identity, had a mean value of 4.932 out of 7 point scale with the standard deviation of 1.242 in their perceptions of the "upscale" attribute.

A comparison of brand personality profiles reveals that the points of differentiation seem to correspond with the emphases of the firms' marketing communications, the nature of the products and services the car brands offer, and their overall performance. The author believes that brand personality can be an effective means by which to differentiate one brand from another, and some firms appear to use this strategy well. Conversely, the findings of this study also provide tentative evidence to indicate that the majority of automobile manufacturers do not effectively use brand personality as a means of brand differentiation, and much improvement is needed.

Within the passenger car category, for example, firm-E has the strongest points of favorable differentiation, on the dimension of upscale. Firm-E has long been the number-one car brand, and this dominance may well be driving car brands' perceptions that it is the most upscale brand of the five examined. Additionally, as compared to the others, the author sees firm-E's advertising and sales promotion efforts as having a stronger and more consistent emphasis on upscale, work-hard and adventure concepts. Compared to the other four brands, the car brand of firm-E is upscale and adventure and its brands produce only in a luxury and premium car category. The cars' image is one of many features intended to attract young adults (87 percent of the sample was 20-49 years old), which is the population sampled in this study. By consistently communicating this message through the years, firm-E may have persuaded consumers to view its brand as being more upscale, work-hard and adventure image than its competitors. Those efforts by firm-E may enable the brand to evoke a greater sense of upscale image among consumers, and explain why firm-E has sought to imitate those tie-ins.

Overall, the five automobile brands are differentiated to the greatest extent on the upscale dimension. As one might expect, upscale brands are perceived as being the most work-hard and adventure. While work-hard and adventure are the distinctive characteristics that the respondents identified for an upscale car, the other car brands are perceived to be sincere but less competent than the one car brand.

MANAGERIAL IMPLICATIONS AND DISCUSSION

The conceptual and empirical analyses reported herein suggest that the consumer personality and brand personality as the consumer's self-concept have important distinctive aspects. Both constructs were found to have independent, strong positive effects on retail car brand purchasing. The results of the hypothesis test empirically show that there exists a certain causality relationship between consumer personality and brand personality as the consumer's self-concept. Thus, the consumer personality has an impact on the consumer's selection of a brand that matches well with one's own personality. Consumers are inclined to purchase a brand that reflects their own personalities and tend to choose a brand, product, or company whose brand personality are being promoted.

These strong effects of brand personality as the consumer's self-concept on brand purchasing replicated many prior studies (e.g. Aaker, 1997; Govers & Schoormans, 2005). These results attest to the proposal that consumers prefer products and brands with the brand personality that matches his/her own self-image. This study concludes that consumers enjoy purchasing a brand with the personality that matches well with their own personal values and personalities. Consequently, consumers tend to hold favorable attitudes toward those brands matching their own personalities and will most probably purchase those brands which well represent their personalities.

Since brand personality is the sole of a brand, it is usually derived from firms' marketing communications. For example, the work-hard, positive, and adventure constructs of consumer personality have positively related to the "upscale" concept of brand personality. It is possible then to identify a percentage or number of consumers who possess those personality characteristics from a large population for targeting and marketing certain brands that match well with the brand characteristic. For example, if it is known that 15 percent or 6 million individuals of the total population of South Korean possess the "work-hard" and "adventure" personality, an automobile manufacturer can design and produce an optimal number of cars, and then perform marketing communications to the target market that seeks the "upscale" image of the brand. This may be the best production plan and target marketing since this study determines that consumers with "work-hard" and "adventure" personality tend to prefer car brands possess "upscale" attribute.

The empirical observations from this study also offer new insights into the potential moderating role of marketing communications on brand personality as the consumer's self-concept measures. There were no significant differences for "honesty" attribute of brand personality among

Korean car brands. Within the "honest" image, all five brands are perceived to be similar. Conversely, the respondents considered all five brands are difficult to differentiate in terms of honest image. These findings are consistent with the fact that brands in honest image run less advertising than do upscale image. This study argues that consumers receive less information regarding the "honest" attribute and, therefore, may have greater difficulty distinguishing one brand from another. In other word, the consumers' perceptions toward Korean cars in terms of "honest" identity may be neutralized by the firms' marketing communications and/or moderated by the mixture of different products and brands of the firms. In other word, the effect of brand personality on the retail car brands was positively moderated by marketing communications.

There is still much to learn about the dialogue between marketers and consumers, and that has been the main focus of research in marketing communications. What has been less well researched is the effect of the consumer's personality on the process of selecting a brand. Brand personality is not fully formed by itself, nor can it be calculated in the brand manager's office. Part of the dialogue and part of the brand developing must involve the personalities of those who would purchase the brand. Therefore, there is considerable possibility and capacity for promoting dialogue between the firm and the consumer by incorporating different aspects of the consumer's personality and the brand personality.

One important implication of the results of this study is that consumer personality and brand personality as the consumer's self-concept should be discussed or measured interchangeably. At present, it seems tenable to describe the role of consumer's self-concept in marketing communications as one of sensitizing target consumers to which kind of self-concept is most important. This information regarding type of consumer's self-concept is quite important and has strong implications for the content and tone of voice for marketing communications messages. Also, different self-concept constructs could be important to different target market segments.

Successful brands are differentiated from their lesser known counterparts due to their robustness, distinctiveness and consistency. Thus, an important objective for brand management is the formation of well-defined brand personality. Brand personality measures potentially do not stimulate the self-concept that consumer personality measures do. Rather, brand personality refers to the set of human characteristics associated with a brand. The role of brand image then is to provide a descriptive overview of brand personality. As the symbolic aspects of brands become increasingly more important, there is a strong need to improve our understanding and measurement of symbolic brand effects. Toward these ends, it would be highly appropriate to more precisely define the role of and relationship between the two symbolic constructs: the consumer's self-concept and brand personality. This current study is a step in that direction.

Considerable research into consumer behavior has examined the self-expressive role of brands, but has found little support for the premise that brand personality has an influence on consumer attitudes. The author proposes that consumers have a part to play in influencing how a brand personality is perceived. This is in contrast to other research and propositions, which suggest

that brand personality is created by how marketers and advertisers intend to project it. The findings suggest that when a brand commands a high preference, the preferred characteristics of consumer personality actually has an influence over its perceived brand personality — provided that the consumer has built a positive relationship with the brand and then projects his/her personality on to the brand.

In conclusion, the findings from this study shed light on the self-expressive use of brands, and the effects of the cultural orientation of consumers in influencing the relationship between their self-concept and the perceived brand personality. Consequently, marketers must strategically position their brands to provide a vehicle for consumers to experience emotional benefits, subsequently leading to stronger brand identity.

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Appendix

Selected Survey Questionnaire		
Personality item descriptions (16 items)	**Mean**	**Std. Deviation**
I rarely feel lonely or blue.	3.924	1.401
I am not a worrier.	3.722	1.486
I am seldom sad or depressed.	3.944	1.423
I rarely feel fearful or anxious.	3.904	1.412
I am a cheerful, high spirited person.	4.252	1.206
I like to be where the action is.	4.478	1.251
I open try new and foreign foods.	4.344	1.375
I have a lot of intellectual curiosity.	4.720	1.270
I don't like to waste my time daydreaming.	4.186	1.377
I have little interest in speculating on the nature of the universe.	4.084	1.321
Some people think I am selfish and egotistical.	3.802	1.417
I tend to be cynical and skeptical of others' intensions.	4.102	1.290
Some people think of me as cold and calculating.	3.976	1.384
I often get into arguments with my family and co-workers.	4.242	1.209
I try to perform all the tasks assigned to me conscientiously.	5.244	1.133
When I make a commitment, I always count on to follow through.	5.058	1.130
I have a clear set of goals and work toward them in an orderly fashion.	4.874	1.170
I strive for excellence in everything I do.	4.974	1.152
I am pretty good about pacing myself so as to get things done on time.	4.760	1.179
I am a productive person who always gets the job done.	4.742	1.132
Brand personality item descriptions (11items)	**Mean**	**Std. Deviation**
I feel honest	4.946	1.125
I feel cheerful	4.962	1.075
I feel spirited/excited/happy	4.830	1.112
I feel reliable	5.094	1.133
I feel successful	4.306	1.458
I feel upper class	3.908	1.591
I feel charming	4.542	1.263
I feel tough/strong	4.624	1.308
I feel competence	4.714	1.325
I feel confidence/having trust	4.840	1.237
I feel wealthy/rich	4.038	1.493

PETS IN PRINT ADVERTISING – ARE WE SEEING MORE OF ROVER AND FLUFFY? A CONTENT ANALYSIS OF FOUR POPULAR MAGAZINES

Charles M. Mayo, Kennesaw State University
Donna T. Mayo, Dalton State College
Marilyn M. Helms, Dalton State College

ABSTRACT

This content analysis of advertising in four popular magazines investigates whether the role of pets—specifically dogs and cats—has changed as they have grown in popularity and power in American culture. Analysis of print advertisements from 1994 and 2004 suggests that although the frequency with which household pets appear in print advertisements has declined slightly, portrayals of "Rover" and "Fluffy" have changed to reflect society's growing fascination with and devotion to our furry family members.

INTRODUCTION

A dog on a leash pulls its master toward a flock of flushing pigeons in an advertisement for asthma medicine. A cat serenely naps on the couch next to a couple of apartment dwellers fretting about their home loan application in an ad for a mortgage company. A billboard purchased by a check cashing company displays two dogs - a large dog (Big Cash) and a much smaller companion dog (Little Cash).

Our favorite household pets play various roles in advertising—as major players in the key message, as message "catalysts" illuminating a key point, or as background characters that merely set a tone or mood for an ad. The connection they have to the product, service or idea being communicated occasionally is direct (i.e. a pet product), but more often is indirect, and sometimes is, arguably, outright nonexistent (i.e. a golden retriever appears in an ad for medicine). Although advertising creative directors have used dogs and cats in advertising for years, Americans' indulgences in their pets have changed drastically (Kennedy & McGarvey, 2008). Nationally, pets account for more household spending than ever before. Whereas in previous generations, Rover and Fluffy may have gotten a bed, some food and occasional trips to the veterinarian, today's pet owners pour money into such things as designer pet clothes, gourmet pet food, pet daycare, healthcare insurance for their pets and other products and services that make life for Rover and Fluffy more comfortable and secure (Ellson, 2008).

Likewise, the importance pets play in the lives of their owners has increased. More than mere companions, Rover and Fluffy now are likely to be treated by their owners as surrogate children, best friends, and partners that add priceless value to life. Holbrook (2008) agrees the role of pets as animal companions has been well documented. This supports the research of Fielding (2008). Utilizing the November 2007 Harris Poll survey data which found nine in 10 pet owners consider their pets members of their family, Fielding (2008) found women are more likely to support this statement (93% to 84%) and dog owners are more likely than cat owners to consider pets family members (93% to 89%).

If advertising reflects and amplifies cultural values, and if dogs and cats have attained positions of power in American culture, then one would expect to see dogs and cats play more significant or visible roles in advertisers' creative strategies.

The question this research attempts to answer is: How have the changed roles and increased value household pets play in our lives been reflected in advertising?

Financial and Social Significance of Pets

Pets have become a central part of American life and have, in recent years, even been credited with having a direct positive effect on the health of their owners (Allen, 2003). Pet owners represented 69.1 million (sixty-three %) American households and of these households, forty-five % had multiple pets (Wallenfang, 2005). As further reported by Wallenfang (2005), dogs numbered 73.9 million and were present in 43.5 million households while cats numbered 90.5 million and were present in 37.7 million households. As pets have become more and more important in the lives of their owners, it only stands to reason that marketers and advertisers would portray pets more in their communication messages.

Consumers spent $34.4 billion dollars in 2004 (double 1994 figures) and $36.3 billion in 2005 (APPMA, 2006) on their pets (not adjusted for inflation). During the December holidays 55% of dog owners spend an average of $13 on Rover, and although only 37% of cat owners purchase gifts for Fluffy, those who indulge their feline companions spend $30 per cat (Wallenfang, 2005). According to the APPMA National Pet Owners Survey, basic annual expenses for dog and cat owners include:

	DOG	CAT
Surgical vet visits	$574	$337
Food	$241	$185
Kennel boarding	$202	$119
Routine vet visits	$211	$179
Groomer/grooming aids	$107	$ 24

	DOG	CAT
Vitamins	$123	$ 32
Treats	$ 68	$ 43
Toys	$ 45	$ 29
TOTAL	$1, 571	$ 948

While the numbers indicate increased levels of spending for pets, there is also an increase in the types of products purchased for pets. Spending across all sectors from pet food and veterinarian care to toys and treats reflects the lengths Americans are willing to go to maintain their pets' healthy and happy lifestyles. In addition to basic services pet owners are willing to provide, other services purchased by pet owners include acupuncture, swimming lessons, massages, vacations, psychotherapy, photo shoots, and portrait packages.

To maintain their animals' lifestyles pet owners are active consumers of pet food, luxury products and health care. Pets and pet care has become the seventh largest retail segment in the U.S. (Schmelzer, 2005). Retail chains have emerged to meet the burgeoning needs of pet owners for food, grooming supplies, and veterinary care. PetsMart, for example, posted $4.67 billion in total sales for 2007 (http://media.corporate-ir.net/media_files/IROL/93/93506/2007_AR.pdf, 2007).

James, McMellon, and Torres-Baumgarten (2004) note pet ownership is a significant new segment of marketing, with differences in pet owner beliefs and attitudes, based on their choice of dog, cat or both dogs and cats as pets. In some instances, dogs and cats have taken the place of children in the lives of their owners. They accompany their owners in travel outside the home, giving evidence to their prominence in their owners' lives. Today major hotel chains have begun marketing to pet owners by welcoming dogs and cats. Accordingly, dogs and cats represent a new segment in the travel market, and they are allowed to fly as passengers on commercial airlines and can even earn frequent flier mileage.

Dogs and cats are the pets most associated with humans in Western culture and are the most common pets in the United States. Ownership of dogs and cats is associated with a number of psychosocial factors including companionship, cognitive development, emotional closeness, and affection. Several factors are driving the increased spending on the care of dogs and cats such as an overall increase in pet ownership and the documented health benefits of owning pets. The physical benefits of owning a dog or cat include an increased chance of surviving a heart attack, blood pressure reduction and lower levels of depression and stress. Child development scholars who have studied the role of pets in children's lives (Thelen, 2000) support pets' role in developing a child's identity and building relationships. Shumway (1999) feels cats and dogs represent a means by which urban apartment dwellers can have sympathy with the larger nonhuman environment with which they otherwise would have limited direct contact. Thus it seems pets are good for the body and the

soul and analysts agree there are untapped areas for growth in the pet industry (Kennedy & McGarvey, 2008).

Although dogs and cats do have a fairly prominent place in society as companion animals for millions of Americans, they have not been studied exhaustively or exclusively in advertising.

Animals in Advertising

Advertisers use animals to attract attention or create a positive feeling about a product. They can be used to transfer desirable cultural meanings such as loyalty, pampering, and caring to products and although their meanings are not standardized across cultures, animals are standard symbols of human qualities (Phillips, 1996).

Harbrecht (1993) agrees animals are universally popular advertising tools. Animals are easily recognized for particular traits, some of which may be used to create an advantage in advertising. Consumers understand the animal meanings and consequently can link these meanings to products. Men prefer advertisements that illustrate loyalty while women prefer advertisements that illustrate a pets' enjoyment of pampering and care by humans (Magdoff & Barnett, 1989).

Using animals in advertising is also a function of efficiency because pets are so easily recognizable. By using the associations that already exist in our culture, advertisers do not have to educate consumers as to what animal characters mean. Since they are so recognizable, dogs and cats can be used as metaphors to efficiently communicate attribute information and transfer meaning between a referent and a brand (Morgan & Reichert, 1999).

In a study of animal images on products, Feldhammer, Whittaker, Monty and Weickert (2002) hypothesized mammals would be more common than fish, birds or reptiles. Cats and dogs were in the majority at 75 % of the labels analyzed and the most common attributes of "strength, power, or tenacity" were favored for the product label messages. Animals often are used as evocative visual symbols in the promotion phase of product marketing (Margulies, 1972 and Wilkie, 1990). Typically animals are used because they are a familiar part of cultures. Phillips (1997) agrees animal symbols are pictorial metaphors used to create and project an image and implicitly communicate information.

In a study of British children's television, Paul (1996) found, while farm animals were dealt with neutrally, family pets (such as dogs and cats) were accorded a positive status in fictional work. One measure of an animal's position in advertising is whether it is made to resemble humans. Anthropomorphism is criticized as being sentimental or an oversimplification of the animal's innate nature. Others, however, see it as an extension of our ability to take the role of the other and to understand the inner world of animals (Lerner & Kalof, 1999).

Pet ownership has been recognized as an important market segmentation tool that transcends product categories. Because pets become associated with self, pet ownership is a separate category

of social identification that influences attitudes and behaviors (McMellon and Torres-Baumgarten 2004).

Advertising Studies

Frogs, dogs, lizards, puppies and a host of other animals have served as spokespersons for a variety of consumer products. Harbrecht (1993) agrees that for some time, advertising agencies have known people around the world respond very favorably to animals in advertisements on television and billboards, in magazines, and newspapers. However, he warns marketers to understand the international and cultural orientations of animals since they may convey different meanings to different groups or cultures.

Lerner and Kalof (1999) studied the message and meaning conveyed by animals in television commercials and how the messages might be subject to alternative readings. The authors found six themes animals portrayed in advertisements: animals as loved ones (a member of the family), as symbols (representation of logos or ideas), as tools (using animals for human use or consumption), as allegories, as nuisances, and animals in nature.

Spears, Mowen and Chakraborty (1996) proposed a model for understanding the impact of the use of animals in advertising. Their content analysis of 500 print advertisements examined the type of animal appearing in advertisements, the product class, and the anthropomorphic state of the animal. They found advertisers selectively associate particular animals with various product categories and found variation by product category when animals are shown in an anthropomorphic state.

Although animals have been the source of limited advertising research, studies have not examined the role of dogs and cats in print advertisements. As the role of pets has changed and increased, it is important to determine if print advertising has changed.

The research questions investigating the changes in a ten-year period of print advertising in this study are:

1a. How prevalent are cats and dogs in magazine advertising?
1b. Has the percentage of pet advertising in magazines increased during 1994 to 2004?

When cats and dogs appear in magazine advertising:

2. Which is used most often?
3. With which types of products are they most likely associated?
4. Are they more likely to be central figures in the ad or background figures?
5. Is the ad most likely to be a photograph, cartoon drawing, or portrait drawing?
6. Are they most likely to have pet, human or wild animal characteristics?

7. What type of relationship with humans characterizes the role of the pet?
8. What is their function?

METHODOLOGY

Magazines were chosen as the media for the research because magazines continue to remain a viable medium for advertisers. Even though Internet display advertising continues to grow (15.9% increase in 2007 to $11.31 billion) magazine media has held steady in terms of advertising expenditures. (TNS Media Intelligence, 2008). Consumer magazines incurred a 7.0% gain to $24.43 billion in 2007 while cable television spending finished 2007 at $17.84 billion, an increase of 6.5% (TNS Media Intelligence, 2008).

To gauge changes in advertising which include dogs and cats, advertisements from 1994 and 2004 issues of four popular magazines, *Ladies Home Journal*, *Time*, *People*, and *Sports Illustrated*, were examined. These magazines were chosen because of their large circulations and because they reach different audiences. *Ladies Home Journal* first began publishing in 1883 and is the tenth largest magazine in the U.S. in terms of circulation. In 2004, paid subscriptions for this magazine numbered 4,114,353 (Audit Bureau of Circulation website at www.accessabc.com/resources/magazines.htm, 2005).

Ladies Home Journal's audience is primarily female and features stories about health and fitness, relationships, beauty and fashion, homemaking and cooking, and family life. It is published monthly by the Meredith Corporation. *Time*, the nation's first weekly news magazine, was first published in 1923. Paid subscriptions in 2004 rank it 11th in size with a circulation of 4,034,272. *Time* offers news features covering national and international news, as well as science, business and cultural news. *People*, which debuted in 1974, is published by the same parent corporation as *Time*. The magazine is published weekly with content that focuses on celebrity and pop culture news. *People's* audience is mostly young people. In 2004 it was the 12th largest magazine with a circulation of 3,690,387. *Sports Illustrated* was started in 1954 to satisfy the information needs of America's sports fans. Its readership is primarily male. Circulation figures in 2004 rank it the 16th largest with 3,319,300 paid subscriptions (Audit Bureau of Circulation website at www.accessabc.com/resources/magazines.htm, 2005)

Because *Time*, *People* and *Sports Illustrated* are weekly and *Ladies Home Journal* is monthly, random issues of the weekly magazines were selected from each month to generate an equal number of issues for both years. All advertisements of at least a quarter page or larger were examined for the presence of dogs or cats. Besides the magazine name and year, coders recorded whether dogs and cats were present, whether humans were present, the product category of the ad, and how the pets are rendered (cartoon, portrait or photograph). See Exhibit A for the coding sheet used. Variables of interest in this study also required coders to make judgments. For example, coders determined the type of characteristics portrayed by the dogs and cats in the advertisements

(wild animals, pet, or human), their relationship with humans in the advertisements (family member, companion, or none), the functionality depicted (assistant/aide, companion, expert, rescuer, teacher, entertainer, or none) and the centrality of the pet in the ad (central, prop, or background).

Two students majoring in marketing reviewed the advertisements during November and December 2005. After initial training, conducted by two of the authors, a sample of advertisements was coded to determine intercoder reliability for content analysis (See Krippendorff, 1980 for a review of content analysis). It was determined that additional training as well as changes in variable definitions was needed. Vague wording was eliminated and definitions were redesigned to clarify how to examine the advertisements. An intercoder reliability coefficient of 82.4 using Cohen's alpha was achieved in a second reliability assessment.

RESULTS

The findings yield interesting results. The discussion below follows the order of the research questions.

1. a. How prevalent are cats and dogs in magazine advertising?

A total of 4,565 advertisements were viewed of which 132 (2.9 %) had dogs, cats, or both dogs and cats present (see Table 1). Sixty-eight (51.5 %) of these advertisements are from the 1994 sample and 64 (48.5 %) are from the 2004 sample. *Ladies Home Journal* is a monthly and the other magazines are weeklies, thus the number of pages of advertising is greater for this magazine than the other magazines studied. Because of this *Ladies Home* Journal accounted for about four in every ten advertisements reviewed in this study (43.8 % in 1994 and 41.8 % in 2004). Except for *Time* in 2004 and *Sports Illustrated* in 1994 and 2004, the proportion of advertisements with dogs and cats to total advertisements per magazine remains fairly constant, at just over 3% of the advertisements.

Table 1: Presence of Dogs and Cats in Advertisements

Magazine	*Time*		*Sports Illustrated*		*Ladies Home Journal*		*People*		Yearly Total		
Year	1994	2004	1994	2004	1994	2004	1994	2004	1994	2004	Total
Total Advertisements with Dogs and Cats Present	14 **20.6**	4 **6.3**	7 **10.3**	7 **10.9**	30 **44.1**	33 **51.6**	17 **25.0**	20 **31.3**	68 51.5	64 **48.5**	132
Presence*											
Dog	13 ***92.9*** **26.0**	2 ***50.0*** **4.3**	7 ***100.0*** **14.0**	7 ***100.0*** **15.2**	15 ***50.0*** **30.0**	23 ***69.7*** **50.0**	15 ***88.2*** **32.6**	14 ***70.0*** **30.4**	50 ***73.5*** **52.1**	46 ***71.9*** **47.9**	96 ***72.7***

Table 1: Presence of Dogs and Cats in Advertisements

Magazine	*Time*		*Sports Illustrated*		*Ladies Home Journal*		*People*		Yearly Total		
Year	1994	2004	1994	2004	1994	2004	1994	2004	1994	2004	Total
Cat	1 ***7.1*** **6.3**	0	0	0	15 ***50.0*** **93.8**	7 ***21.2*** **53.8**	0	6 ***30.0*** **46.2**	16 ***23.5*** **55.2**	13 ***20.3*** **44.8**	29 ***22.0***
Dog & Cat	0	2 ***50.0*** **40.0**	0	0	0	3 ***9.1*** **60.0**	2 ***11.8*** **100.0**	0	2 ***2.9*** **28.6**	5 ***7.8*** **71.4**	7 ***5.3***

***The** top number represents the number of advertisements in the sample for that cell. The second number (in bold italics) represents the percentage of advertisements in that cell to the total advertisements that year for that magazine (ex: 13/14 = .929). The third number (in bold) is the percentage of advertisements in that cell to the total number of advertisements for that category for that year (ex: 13/50 = .26).

1. b. Has the percentage of pet advertising in magazines increased during 1994 to 2004?

In 1994, 68 of the 2,504 advertisements in the four magazines reviewed featured pets. In 2004, of the 2,061 advertisements in the four magazines, 64 featured pets. The results indicate the number of advertisements (as a percentage of the total advertisements) has increased only slightly (2.7% in 1994 to 3.1% in 2004) and this increase is not significant (at the 0.05 level).

2. When cats and dogs appear in magazine advertising, which is used most often?

According to this sample, dogs are more favored than cats by advertising directors by about three-to-one (Table 1). Dogs account for 72.7 % of the advertisements and cats account for 22 % of the advertisements in this study. Only 5.3 % of the advertisements use both dogs and cats. Overall dogs and cats declined in advertisements from 1994 to 2004, but there was a slight overall increase in the number of advertisements featuring dogs and cats together. Dogs gained favor and cats lost their appeal between 1994 and 2004 in *Ladies Home Journal* advertisements. Advertisements with only dogs in *Ladies Home Journal* accounted for 30 % of the advertisements in 1994 (15 of 50) and this increased in 2004 to 50 % (23 of 46) of the advertisements. However, *Ladies Home Journal* advertisements with only cats accounted for 93.8 % (15 of 16) of all advertisements in the sample in 1994 but this decreased to 53.8 % (7 of 13) of advertisements in 2004. Dogs in advertisements were limited in *Time* [13 of 50 (26 %) in 1994 and only 2 of 46 (4.3 %) in 2004]. Cats gained ground in advertising in *People*. There are no advertisements in the sample from *People* featuring only cats in1994 but in 2004 six of the 13 advertisements (46.2 %) featured only cats.

3. When dogs and cats appear in advertisements, with which types of products are they most likely associated?

Dogs and cats are used to sell non-pet products in a majority of the advertisements in this study (Table 2). Advertisements for pet products (food, grooming, hygiene, health and other pet products) account for 48.5 % of the advertisements. In 1994, 38 (55.9%) of advertisements with dogs and cats present were for pet products, compared to 26 (40.6%) of advertisements in 2004. Overall, non-pet products were the subject of 30 (44.1%) advertisements in 1994 and non-pet advertisements increased to 38 (59.4%) in 2004. *Ladies Home Journal* and *People* exhibited this pattern.

Table 2: Product Categories for Advertisements with Dogs and Cats

Magazine	*Time*		*Sports Illustrated*		*Ladies Home Journal*		*People*		Yearly Total		
Year	1994	2004	1994	2004	1994	2004	1994	2004	1994	2004	Total
Total Advertisements with Dogs and Cats Present	14 **20.6**	4 **6.3**	7 **10.3**	7 **10.9**	30 **44.1**	33 **51.6**	17 **25.0**	20 **31.3**	68 **51.5**	64 **48.5**	132
Product Category*											
Pet Products/Services	4 ***28.6*** **10.5**	0	0	1 ***14.3*** **3.8**	23 ***76.7*** **60.5**	18 ***54.5*** **69.2**	11 ***64.7*** **28.9**	7 ***35.0*** **26.9**	38 ***55.9*** **59.4**	26 ***40.6*** **40.6**	64 ***48.5***
Non-Pet Products/Services	10 ***71.4*** **33.3**	4 ***100.0*** **10.5**	7 ***100.0*** **23.3**	6 ***85.7*** **15.8**	7 ***23.3*** **23.3**	15 ***45.5*** **39.5**	6 ***35.3*** **20.0**	13 ***65.0*** **34.2**	30 ***44.1*** **44.1**	38 ***59.4*** **55.9**	68 ***51.5***

*** The** top number represents the number of advertisements in the sample for that cell. The second number (in bold italics) represents the percentage of advertisements in that cell to the total advertisements that year for that magazine (ex: 4/14 = .286). The third number (in bold) is the percentage of advertisements in that cell to the total number of advertisements for that category for that year (ex: 4/38 = .105).

4. When cats and dogs appear in advertisements, are they more likely to be central figures in the ad or background figures?

The pet is the central character in 62.1% of advertisements (See Table 3). Dogs and cats are a prop for a central character in 18.9 % and are background and/or periphery in another 18.9 %. No significant shift occurred in these variables in 2004 as compared to 1994. *Ladies Home Journal* had a significant increase in the prop-to-central-character and *People* had an increase in the pets as central characters category.

Table 3: Centrality of Pets in Advertisements											
Magazine	*Time*		*Sports Illustrated*		*Ladies Home Journal*		*People*		Yearly Total		
Year	1994	2004	1994	2004	1994	2004	1994	2004	1994	2004	Total
Total Advertisements with Dogs and Cats Present	14 **20.6**	4 **6.3**	7 **10.3**	7 **10.9**	30 **44.1**	33 **51.6**	17 **25.0**	20 **31.3**	68 **51.5**	64 **48.5**	132
Centrality*											
Central Character	4 ***28.6*** **9.5**	0	3 ***42.9*** **7.1**	4 ***57.1*** **10.0**	24 ***80.0*** **57.1**	22 ***66.7*** **55.0**	11 ***64.7*** **26.2**	14 ***70.0*** **35.0**	42 ***61.8*** **51.2**	40 ***62.5*** **48.8**	82 ***62.1***
Prop to Central Character	7 ***50.0*** **58.3**	3 ***75.0*** **23.1**	1 ***14.3*** **8.3**	0	2 ***6.7*** **16.7**	8 ***24.2*** **61.5**	2 ***11.8*** **16.7**	2 ***10.0*** **15.4**	12 ***17.6*** **48.0**	13 ***20.3*** **52.0**	25 ***18.9***
Background/periphery	3 ***21.4*** **21.4**	1 ***25.0*** **9.1**	3 ***42.6*** **21.4**	3 ***42.6*** **27.3**	4 ***13.3*** **28.6**	3 ***9.1*** **27.3**	4 ***23.5*** **28.6**	4 ***20.0*** **36.4**	14 ***20.6*** **56.0**	11 ***17.2*** **44.0**	25 ***18.9***

*** The** top number represents the number of advertisements in the sample for that cell. The second number (in bold italics) represents the percentage of advertisements in that cell to the total advertisements that year for that magazine (ex: 4/14 = .286). The third number (in bold) is the percentage of advertisements in that cell to the total number of advertisements for that category for that year (ex: 4/42 = .095).

5. When dogs and cats appear in advertisements, is the ad most likely to be a photograph, cartoon drawing, or portrait drawing?

The most common way of depicting a dog or cat in magazine advertising, according to this sample, is using a photograph (see Table 4). Two-thirds of the total advertisements in this study use photographs, whereas 19.7% use cartoon drawings and 13.6 % use portrait drawings. The use of photography to show a dog or cat in advertising increased in this study in 2004 as compared to 1994. In 2004 the use of cartoons and portraits to show dogs and cats in advertising fell to 7.8 % each and the use of photography increased to 84.4%. Considering the four magazines studied, a significant shift occurred in both *Ladies Home Journal* and in *People*. *Ladies Home Journal* relies on cartoon and portrait drawings in 63.3 % of the advertisements and photography in 36.7 of the advertisements in 1994. But in 2004, *Ladies Home Journal* has cartoon and portrait drawings in 12.2% of pet advertisements and relied on photographs in 87.9% of the advertisements. *People* shifted from 41.2% use of cartoon and portrait drawings in 1994 to 90 % photography in 2004.

Table 4: Rendering of Pets in Advertisements											
Magazine	*Time*		*Sports Illustrated*		*Ladies Home Journal*		*People*		Yearly Total		
Year	1994	2004	1994	2004	1994	2004	1994	2004	1994	2004	Total
Total Advertisements with Dogs and Cats Present	14 **20.6**	4 **6.3**	7 **10.3**	7 **10.9**	30 **44.1**	33 **51.6**	17 **25.0**	20 **31.3**	68 **51.5**	64 **48.5**	132
Rendering of Pet*											
Cartoon Drawing	1 ***7.1*** **4.8**	1 ***25.0*** **20.0**	2 ***28.6*** **9.5**	1 ***14.3*** **20.0**	16 ***53.3*** **76.2**	2 ***6.1*** **40.0**	2 ***11.8*** **9.5**	1 ***5.0*** **20.0**	21 ***30.9*** **80.7**	5 ***7.8*** **19.3**	26 ***19.7***
Portrait Drawing	4 ***5.9*** **30.8**	0	1 ***14.3*** **7.7**	2 ***28.6*** **40.0**	3 ***10.0*** **23.1**	2 ***6.1*** **40.0**	5 ***29.4*** **38.5**	1 ***5.0*** **20.0**	13 ***19.1*** **72.2**	5 ***7.8*** **27.8**	18 ***13.6***
Photograph	9 ***64.3*** **26.5**	3 ***75.0*** **5.6**	4 ***57.1*** **11.8**	4 ***57.1*** **7.4**	11 ***36.7*** **32.4**	29 ***87.9*** **53.7**	10 ***58.8*** **29.4**	18 ***90.0*** **33.3**	34 ***50.0*** **38.6**	54 ***84.4*** **61.4**	88 ***66.7***

* **The** top number represents the number of advertisements in the sample for that cell. The second number (in bold italics) represents the percentage of advertisements in that cell to the total advertisements that year for that magazine (ex: 1/14 = .071). The third number (in bold) is the percentage of advertisements in that cell to the total number of advertisements for that category for that year (ex: 1/21 = .048).

6. When dogs and cats appear in advertisements, are they most likely to have pet, human or wild animal characteristics?

Maintaining pet-like qualities for dogs and cats in advertising is the most desired strategy for advertisements in this study (Table 5). About seven in every ten advertisements with dogs and/or cats (69.7%) depict them with pet characteristics. Seventeen of the 132 advertisements in this study (12.9%) show dogs and cats with human characteristics and 15.9% of the advertisements use dogs and cats with both pet and human characteristics simultaneously. No advertisements portray dogs and cats as having wild animal characteristics, nor are any dogs and cats given both wild animal and human characteristics, nor are there advertisements with all three characteristics (wild animal, pet and human qualities) present.

Table 5: Characteristics of Pets in Advertisements											
Magazine	*Time*		*Sports Illustrated*		*Ladies Home Journal*		*People*		Yearly Total		
	1994	2004	1994	2004	1994	2004	1994	2004	1994	2004	Total
Total Advertisements with Dogs and Cats Present	14 **20.6**	4 **6.3**	7 **10.3**	7 **10.9**	30 **44.1**	33 **51.6**	17 **25.0**	20 **31.3**	68 **51.5**	64 **48.5**	132
Pet Characteristics*											
Wild Animal	0	0	0	0	0	0	0	0	0	0	0
Pet Animal	7 ***50.0*** **14.9**	3 ***75.0*** **6.7**	2 ***28.6*** **4.3**	3 ***42.9*** **6.7**	25 ***83.3*** **53.2**	27 ***81.8*** **60.0**	13 ***76.5*** **27.7**	12 ***60.0*** **26.7**	47 ***69.1*** **51.1**	45 ***70.3*** **48.9**	92 ***69.7***
Human	2 ***14.3*** **15.4**	1 ***25.0*** **25.0**	3 ***42.9*** **23.1**	2 ***28.6*** **50.0**	5 ***16.7*** **38.5**	0	3 ***17.6*** **23.1**	1 ***5.0*** **25.0**	13 ***19.1*** **76.5**	4 ***6.3*** **23.5**	17 ***12.9***
Wild Animal & Pet Animal	0	0	0	0	0	2 ***6.1*** **100.0**	0	0	0	2 ***3.1*** **100.0**	2 ***1.5***
Wild Animal & Human	0	0	0	0	0	0	0	0	0	0	0
Pet Animal & Human	5 ***35.7*** **62.5**	0	2 ***28.6*** **25.0**	2 ***28.6*** **15.4**	0	4 ***12.1*** **30.8**	1 ***5.9*** **12.5**	7 ***35.0*** **53.8**	8 ***11.8*** **38.1**	13 ***20.3*** **61.9**	21 ***15.9***
All Three	0	0	0	0	0	0	0	0	0	0	0

* **The** top number represents the number of advertisements in the sample for that cell. The second number (in bold italics) represents the percentage of advertisements in that cell to the total advertisements that year for that magazine (ex: 7/14 = .500). The third number (in bold) is the percentage of advertisements in that cell to the total number of advertisements for that category for that year (ex: 7/47 = .149).

7. When cats and dogs appear in advertisements, what type of relationship with humans characterizes the role of the pet?

Nearly six in every ten advertisements (59.1%) have pets but no humans present (Table 6). In advertisements with humans, however, the dog or cat is presented as a family member nearly half the time (46.3%) and as a companion about a quarter of the time (25.9%). No relationship is depicted in 27.8 % of the advertisements in this sample. Dogs and cats enjoyed a significant shift in status. Only 32% of the advertisements depict the relationship pets have with humans as a family member in 1994, but in 2004, 68% of the advertisements show dogs and cats as family members.

Table 6: Relationship of Pets to Humans in Advertisements

Magazine	*Time*		*Sports Illustrated*		*Ladies Home Journal*		*People*		Yearly Total		
	1994	2004	1994	2004	1994	2004	1994	2004	1994	2004	Total
Total Advertisements with Dogs and Cats Present	14 **20.6**	4 **6.3**	7 **10.3**	7 **10.9**	30 **44.1**	33 **51.6**	17 **25.0**	20 **31.3**	68 **51.5**	64 **48.5**	132
Advertisements with Dogs and Cats But No Humans*	8 ***57.1*** **16.7**	1 ***25.0*** **3.3**	3 ***42.9*** **6.3**	1 ***14.3*** **3.3**	23 ***76.7*** **47.9**	19 ***57.6*** **63.3**	14 ***82.4*** **29.2**	9 ***45.0*** **30.0**	48 ***70.6*** **61.5**	30 ***46.9*** **38.5**	78 ***59.1***
Advertisements with Dogs and Cats and Humans	6 ***42.9*** **30.0**	3 ***75.0*** ***8.8***	4 ***57.1*** **10.0**	6 ***85.6*** **17.6**	7 ***23.3*** **35.0**	14 ***42.4*** **41.2**	3 ***17.6*** **15.0**	11 ***55.0*** **32.3**	20 ***29.4*** **37.0**	34 ***53.1*** **62.9**	54 ***40.9***
Relationship with Humans											
Family Member	3 ***50.0*** **37.5**	0	2 ***50.0*** **25.0**	1 ***16.7*** **5.9**	0	8 ***57.1*** **47.1**	3 ***100.0*** **37.5**	8 ***72.7*** **47.1**	8 ***40.0*** **32.0**	17 ***50.0*** **68.0**	25 ***46.3***
Companion	1 ***16.7*** **14.3**	0	0	1 ***16.7*** **14.3**	6 ***85.7*** **85.7**	5 ***35.7*** **71.4**	0	1 ***9.1*** **14.3**	7 ***35.0*** **50.0**	7 ***20.6*** **50.0**	14 ***25.9***
No Relationship Depicted	2 ***33.3*** **40.0**	3 ***100.0*** **30.0**	2 ***50.0*** **40.0**	4 ***66.7*** **40.0**	1 ***14.3*** **20.0**	1 ***7.1*** **10.0**	0	2 ***18.2*** **20.0**	5 ***25.0*** **33.3**	10 ***29.4*** **66.7**	15 ***27.8***

* **The** top number represents the number of advertisements in the sample for that cell. The second number (in bold italics) represents the percentage of advertisements in that cell to the total advertisements that year for that magazine (ex: 3/14 = .214). The third number (in bold) is the percentage of advertisements in that cell to the total number of advertisements for that category for that year (ex: 3/8 = .375),

8. When dogs and cats appear in advertisements, what is their function?

Companionship is the function most commonly portrayed by dogs and cats (see Table 7). When functionality is portrayed, companionship accounts for 51% of the advertisements. The pet-as-expert is depicted in 33.3% of the advertisements where functionality is portrayed. Portrayals of pets as assistants or aides to humans and depictions of pets as rescuers were not present in this study. No functional relationship is depicted in 61.4% of the advertisements.

Table 7: Functionality of Pets in Advertisements

Magazine	*Time*		*Sports Illustrated*		*Ladies Home Journal*		*People*		Yearly Total		
	1994	2004	1994	2004	1994	2004	1994	2004	1994	2004	Total
Total Advertisements with Dogs and Cats Present	14 **20.6**	4 **6.3**	7 **10.3**	7 **10.9**	30 **44.1**	33 **51.6**	17 **25.0**	20 **31.3**	68 **51.5**	64 **48.5**	132
No Functionality Portrayed*	10 ***71.4*** **25.0**	4 ***100.0*** **9.8**	4 ***57.1*** **10.0**	4 ***57.1*** **9.8**	17 ***56.7*** **42.5**	19 ***57.6*** **46.3**	9 ***52.9*** **22.5**	14 ***70.0*** **41.1**	40 ***58.8*** **49.4**	41 ***64.1*** **50.6**	81 ***61.4***
Functionality is Portrayed	4 ***28.6*** **14.3**	0	3 ***42.9*** **10.7**	3 ***42.9*** **13.0**	13 ***43.3*** **46.4**	14 ***42.4*** **60.9**	8 ***47.1*** **28.6**	6 ***30.0*** **26.1**	28 ***41.2*** **54.9**	23 ***35.9*** **45.1**	51 ***38.6***
Type of Functionality of Pet in Ad											
Assistant/Aide to Human	0	0	0	0	0	0	0	0	0	0	0
Companion	3 ***75.0*** **25.0**	0	2 ***66.7*** **16.7**	2 ***66.7*** **14.3**	5 ***38.5*** **41.7**	6 ***42.9*** **42.9**	2 ***25.0*** **16.7**	6 ***100.0*** **42.9**	12 ***42.9*** **46.2**	14 ***60.9*** **53.8**	26 ***51.0***
Expert	0	0	1 ***33.3*** **7.7**	1 ***33.3*** **25.0**	6 ***46.1*** **46.2**	3 ***21.4*** **75.0**	6 ***75.0*** **46.2**	0	13 ***46.4*** **76.5**	4 ***17.4*** **23.5**	17 ***33.3***
Rescuer	0	0	0	0	0	0	0	0	0	0	0
Teacher	0	0	0	0	0	3 ***21.4*** **100.0**	0	0	0	3 ***13.0*** **100.0**	3 ***5.9***
Entertainer	1 ***25.1*** **33.3**	0	0	0	2 ***15.4*** **66.7**	2 ***14.3*** **100.0**	0	0	3 ***10.7*** **60.0**	2 ***8.7*** **40.0**	5 ***9.8***

*** The** top number represents the number of advertisements in the sample for that cell. The second number (in bold italics) represents the percentage of advertisements in that cell to the total advertisements that year for that magazine (ex: 3/14 = .214). The third number (in bold) is the percentage of advertisements in that cell to the total number of advertisements for that category for that year (ex: 3/12 = .250).

DISCUSSION

This content analysis of magazine advertising portraying dogs and cats gives mixed results. If pets have become more central to the lives of many Americans and dogs and cats have attained greater positions of power in American culture than ever before as suggested by sociologists, psychologists, and marketers, one would expect to see an increase in their use in advertising and a

shift in the portrayals of dogs and cats in advertising to reflect their more central role in the lives of consumers.

However, the frequency with which pets appear in magazine advertising shows a slight decline between 1994 and 2004, but the varying portrayals of dogs and cats do suggest recognition of their growing power and changing role in Americans' lifestyles. The total number of advertisements with dogs and cats in this study decreased slightly from 1994 to 2004 (51.5% of the total advertisements with pets in them in 1994 and 48.5% in 2004). But, the advertisements in which dogs and cats appeared shifted from 1994 to 2004 from being predominantly pet products/services (55.8% in 1994) to predominantly non-pet products/services (59.5% in 2004). This suggests that over this period of time advertisers began to see greater value in portraying the relationship humans have with their pets across a broader range of products/services than just pet-related products/services. This is also reflected in the presence of pets in advertising across all non-pet product/service categories coded in the 2004 sample.

In 1994 dogs and cats were more likely to be used in advertisements for pet-related products, thus they could be viewed as "experts" for the products that meet their wants and needs. In 2004, dogs and cats were used in more advertising for non-pet products which emphasized their companionship role to the product users. In terms of their centrality in the advertisements, in both the 1994 and 2004 samples when pets appeared, they were likely to be the central character in the ad (61.8 % in 1994 and 62.5 % in 2004).

How pets are depicted in advertisements in either drawings or photographs also suggests a shift, albeit slight. Cartoon drawings of pets were used in nearly one in every three advertisements (30.9%) in the 1994 sample, but in 2004 cartoon drawings were used in less than 10 advertisements (7.8%). The use of photographs to depict pets, on the other hand, increased from 50 % in 1994 to 85% in 2004. In other words, in 2004 pets were more likely to be used by advertisers as real players with important roles in humans' lives, as photography reflects, rather than imaginary, fantastical creatures as cartoon drawing suggest.

One would expect the characteristics of pets portrayed in advertising to reflect a similar shift over this period of time, but that is not the case. Dogs and cats with pet characteristics were portrayed in about half the advertisements in both the 1994 sample (51.1 %) and the 2004 sample (48.9 %) and pets with human characteristics experienced a decline (19.1 % in 1994 to 6.3 % in 2004). This could be due to decline in use of cartoon drawings in which pets can take on human characteristics. Dogs and cats with both pet and human characteristics increased (11.8 % in 1994 to 20.3 % in 2004) but this accounted for a small proportion (15.9 %) of all advertisements with dogs and cats.

Pets' relationships with humans showed a dramatic change between 1994 and 2004 as pets were portrayed as more integrated into humans' lives. In 2004 half the advertisements with pets and humans portrayed pets as members of the family. In 1994 pets were nearly as likely to be shown as mere companions (35%) as family members (40%).

No functionality was portrayed in nearly six in every ten advertisements with pets (61.4 %) in the total sample. Of those that did, companionship was the dominant function (19.7 %) and pets-as-expert was the next most dominant (12.9%) across the total sample. Companionship increased (42.8% in 1994 and 60.9 % in 2004) and pets-as-expert decreased (46.4% in 1994 and 17.4% in 2004). This likely reflects the shift in the types of products for which dogs and cats appeared in advertising.

CONCLUSION

This content analysis of 1994 and 2004 issues of four popular magazines, *Time, People, Ladies Home Journal and Sports Illustrated,* has examined the role dogs and cats play in advertising. Pets have achieved a prominent status in American consumers' lifestyles as reflected in the myriad of products and services aimed at pet owners and documented by sociologists and psychologists. This study investigates whether or not magazine advertising reflects this status change. Results indicate that although the frequency of use of pets in magazine advertising actually shows a slight decline in 2004 from 1994 levels, the ways in which dogs and cats are portrayed do reflect a recognition on the part of advertisers that pets play a more important role in consumers' live than ever before. This is suggested by the variety of product/service advertising in which pets appear and a greater tendency to show pets as fully integrated into the everyday life of consumers and in the companionship role.

Because of the static nature of print, analyzing print media advertising presents some challenges, especially when judging relationships between characters. An examination of television advertising in which relationships between characters are more fluid would provide a richer examination of variables related to this facet. Magazines included in this study were chosen because of their circulation size and appeal to diverse audiences. Examinations of other publications, for example family-oriented periodicals (example: *Good Housekeeping*, and *Southern Living*), might yield different results. The time periods examined in this study, 1994 and 2004, also offer a restricted period in which shifts in pets used in advertising are expected to occur. An examination over a longer period of time would likely reveal more dramatic changes.

Magazines continue to remain a viable medium for advertisers even though Internet display advertising continues to grow (15.9% increase in 2007 to $11.31 billion) (TNS Media Intelligence, 2008). According to additional data from TNS Media Intelligence (2008) magazine media has held steady advertising expenditures. Consumer magazines incurred a 7.0% gain to $24.43 billion in 2007 while cable television spending finished 2007 at $17.84 billion and increase of 6.5%. However the role of pets in other media should be studied.

Future studies should include broadcast advertising and examine the use of pets in advertising over a longer period of time. Social and cultural characteristics such as single-parent households, adults living alone and aging adults, should be examined to explore how pets are used in advertising

when these characteristics are present. The role of pets in such instances may be different than when they are absent.

A deeper examination of the types of product/service advertising in which pets appear and the attributes associated with pets might reveal information about creative strategy. For example, what characteristics of dogs most amplify product/service attributes and what characteristics of cats might do the same? Further study is also needed to determine consumer reactions to pets in general and specifically to dogs and to cats as well as to determine differences in attitudes, opinions, and interests among pet owners and non pet owners. Also of interest would be if differences can be applied to decision making for marketing and advertising efforts. As pet owners continue to increase the dollars spent on pet related products, the study of pets in advertising should garner more and varied interest.

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EXHIBIT A

Coding Instructions

Summary

You are to examine all advertisements in four magazines: *Time*, *Sports Illustrated*, *Ladies Home Journal*, and *People*. All of these publications except *Ladies Home Journal* are weekly magazines. *Ladies Home Journal* is monthly. Issues of *Time, Sports Illustrated* and *People* have randomly selected for each month. You must do this for the years 1994 and in 2004. The purpose of the study is to examine the use and portrayals of dogs and cats in magazine advertising. Advertising tries to evoke emotional responses from consumers and dogs and cats possess characteristics that trigger these responses. About 40 % of American households own at least one dog and 36 % own at least one cat.

What to code

All display advertisements one-quarter page or larger appearing in one of the magazines must be coded. A display ad is the opposite of a classified ad and usually has a large headline and/or illustration, body copy and the company's logo. It is important to code each one so that some idea of number or percentage of advertisements with dogs or cats in them can be determined. If no dog or cat appears in an ad, simply mark the coding sheet appropriately and move to the next ad.

How to code

It is important to use the coding sheet correctly. The coding sheet is the list of variables you need to examine in each of the advertisements. Each variable has a numerical value you must assign from your examination of the ad and write in the space on the far right.

Variables

The variables of interest and an explanation of the numerical values are as follows:

Magazine:
1 = *Time*
2 = *Sports Illustrated*
3 = *Ladies Home Journal*
4 = *People*

Year:
1 = 1994
2 = 2004

Pet Presence:
1 = None
2 = Dog
3 = Cat
4 = Dog and Cat

Note: If no pet appears in ad mark 1 in the space to the far right, and go to next ad in magazine. Some advertisements may use a dog and a cat. Mark those advertisements 4 in this space. It doesn't matter how many of either or both at this point.

Human Presence: 1 = No
2 = Yes

Size: 1 = one-quarter page
2 = half-page
3 = full-page
4 = two-page
5 = advertising supplement

Note: Most of these are self explanatory. An advertising supplement is a multi-page advertisement. It may have multiple illustrations (cartoons, portraits, and photographs). Treat the entire supplement as one ad.

Product category: 1 = Pet product/service
2 = Non-pet product/service

Note: If the product/service being promoted is neither pet food, pet grooming (combs, brushes, shampoo, etc), or pet hygiene/health (flea and tick powder, heart worm medicine, cat litter, hair-ball remedy, etc.) nor some other product/service aimed at pet owners categorize it as a non-pet product/service.

Number of dogs 1 = none

in the ad: 2 = one
3 = two
4 = three
5 = four
6 = five
7 = more than five

Note: These are categorical data so simply writing the number is not suitable for statistical analysis.

Number of cats See above.

in the ad:

Rendering: 1 = Cartoon drawing
2 = Portrait drawing
3 = Photograph

Note: A cartoon drawing will exaggerate some element of animal(s): big nose, floppy ears, huge gut, long tail, etc. A portrait drawing will be a painting or sketch that attempts to capture what the animal truly looks like. You should know what a photograph looks like.

Pet characteristics:
1 = wild animal-like
2 = Pet animal-like
3 = Human-like
4 = Wild and pet animal
5 = Wild animal and human
6 = Pet animal and human
7 = All three.

Note: A wild animal-like characteristic will show the animal in a ferocious or threatening pose, or in some setting in the wild (the forest, for example). A pet animal-like characteristic will show the animal in a friendly or companion-like pose or in a setting with humans (family), a yard, a vehicle, or home doing "pet-like" things. A human-like characteristic will show the animal in some pose similar to humans (sitting at a dinner table, driving an automobile, buying a product, speaking English, for examples)

Setting of ad:
1 = In the home
2 = On the porch/in the yard
3 = In/near a vehicle
4 = At the vet
5 = At a retail store
6 = In the wild
7 = Can't tell/no background

Note: These are pretty self-explanatory. Make sure to differentiate between a yard and the woods (the wild). By near automobile or truck/SUV this means about to get into, near open door of, and/or looking into the window of these vehicles (they are not in the vehicle but the intent of the illustration is to show they either are about to get into or want to get into the vehicle).

Centrality of pet in ad:
1 = Central character
2 = Prop to central character
3 = Background/ periphery.

Note: Central character means the pet occupies the center of the ad and other elements in the illustration are secondary. Prop to central character means some other element (a human, for example) is the central character and he/she has a dog and/or cat with him/her. Background/periphery means other elements in the illustration are central to the visual focus. The dog and/or cat is/are on the outer edges of the illustration or in the background, behind the central focus.

Relationship with humans:
1 = No humans in ad
2 = Family member
3 = Companion
4 = Other
5 = No relationship

Note: If no humans appear in the ad there can be no relationship with them. Family member means the dog or cat is portrayed as a member of the family (lying on the couch with children, in the backseat of the family SUV, playing in the

yard with children, waiting to be fed, for examples). Companion means there is a sole human character in the ad with whom the dog or cat is identified (A woman is petting her cat, a child petting his/her dog, a man scratching the ears of his dog, a child playing with his/her cat, for examples).

Age of humans in ad: 1 = No humans
2 = Adult
3 = Child
4 = Both adult and child

Note: Advertisements tend to be pretty obvious in their depictions so there should be not trouble differentiating between an adult and a child. Teenagers may present a challenge, however.

Gender of humans: 1 = No humans
2 = Male
3 = Female
4 = Both male and female

Functional portrayal: 1 = Assistant/aide to human
2 = Companion
3 = Expert
4 = Rescuer
5 = Teacher
6 = Entertainer
7 = Other
8 = No functionality

Note: Assistant/aide means the dog or cat is lending its assistance to some human or other animal (a seeing-eye dog, for example). Companion means the dog or cat is portrayed as a faithful friend for a human or other animal. Expert means because of the animal's characteristics, its skills are valued (a cat's balance or a dog's sense of smell, for examples). Rescuer means the pet is coming to the aid of someone in distress (a St. Barnard rescuing a lost hiker, a cat protecting its owner from a mouse, for examples), Teacher means the pet is explaining some "law" or conveying some information needed by the human or animal student (a dog explaining the importance of protein in his/her diet, a cat explaining the essence of independence, for examples). Leader means the pet is given leadership skills that are important for the product/brand (a dog leads its owner through a combat zone, for example). Entertainer means the pet is portrayed as a source of entertainment (playing Frisbee with a dog or dangling a fuzzy ball on the end of a string for a cat to play with, for examples). If there is no category listed for what you see as a distinct portrayal, describe it the space provided and write 7 in the space to the right. If you can see no functionality (a pet is shown standing alone with not background, for example) write 8 in the space to the right.

ATTITUDES TOWARD COUPON USE AND BARGAIN HUNTING: AN EXAMINATION OF DIFFERENCES BY GENDER

C. Jeanne Hill, Prairie View A&M University
Susan K. Harmon, Pacific Lutheran University

ABSTRACT

The vast majority of research on attitudes toward coupon use and bargain hunting behavior has focused on females. This research addresses the differences between males and females and compares attitudes across age groups. Sample members completed a questionnaire asking about their level of agreement or disagreement with twenty-five attitude statements about coupon use and bargain hunting. The authors found males and females differ in their opinions for just fewer than half of the twenty-five attitude statements. While most consumers see the benefits of using coupons and of bargain-hunting, the majority feels that collecting and using coupons is neither fun nor convenient. A few variations in attitudes are evident between age groups.

INTRODUCTION

The conclusion of several major studies of male shopping behavior in the past decade is that males have become more active in the marketplace, are not understood, and are largely underserved (Bakewell & Mitchell, 2004; Harmon & Hill, 2003; Otnes & McGrath, 2001). A study reported in DSN Retailing Today (Duff 2003) found males responsible for about 54% of household shopping, with younger males more likely to share the responsibility than older men.

Harmon and Hill (2003) suggest that changes in the role of males in the marketplace are largely due to major demographics shifts in the U.S. Many boys today experience a different gender socialization process than their predecessors. Specifically, the increase in single-parent households and single person households due to divorce and due to an increase in the average age of first marriages, has contributed to the changing role of males in the household and the marketplace. Bates and Gentry (1994), for example, found that children were treated more as equals and given more household responsibilities in single-parent households, while Twiggs et al. (1999) hypothesized that males coming from single-parent households are probably more likely to move through "gendered hierarchies" to more strongly held beliefs in gender role equality. This study has as its objective the investigation of whether possible gender differences in attitudes toward behaviors such as coupon use and bargain hunting are based on age or cohort group.

LITERATURE REVIEW

While few studies have focused on male shopping behavior (Bakewell & Mitchell, 2004; Dholakia, 1999; Hermann, 1998; Campbell, 1997; Reid & Brown, 1996), and even fewer on gender differences in bargain-related behavior (Harmon & Hill, 2003; Mittal, 1994), all concluded that males view shopping less positively and exhibit different shopping styles. For example, males have historically considered shopping as a utilitarian activity, driven by the need to purchase, while females have viewed it as more inherently enjoyable (Campbell, 1997). Hermann (1998) hypothesized that males shop to achieve more "masculine" goals such as bargaining to gain status, success, and power.

It might be that whether or not one uses coupons depends simply on the amount and requirements of coupon savings as suggested by Dholakia et al. (1995). However, several researchers (Ashworth et al., 2005; Babakus et al., 1988) believe price savings to be only one reason for coupon use, with the marketing literature largely concurring that psychological factors may also motivate bargain-related behavior. A similar gender dichotomy seems to apply to bargain-related shopping behavior as it does to shopping behavior in general. An NCH/Nu World Marketing study (1999) supported by the work of Mittal (1994) found males use coupons for different reasons than females. These studies suggest "enjoyment" is the best predictor of attitudes toward coupon use. The meaning of "enjoyment," however, possibly differs between the sexes. For men, in an instrumental role, enjoyment might result from having "earned" a price advantage or from an ego boost as males feel they have "beaten the system." For females in the nurturing role, the use of coupons might encompass better care of the family.

Ashworth et al. (2005) looked at the conflict that often occurs between the psychological and price rewards of coupon use and the social costs resulting from appearing "cheap" to others. These researchers found that although an individual who uses coupons to save money perceives him or herself as a "smart shopper," that same individual might also hold a negative self-perception, one of being a "cheap shopper." The results of the study also suggest that the size of the savings cannot negate the "cheap shopper" perception. Other studies (Huff & Alden, 1998; Dhar & Hoch, 1996) support this contention.

The ambiguity surrounding the issue of gender differences in bargain-related shopping behavior, particularly coupon use, begs for a more thorough investigation. Understanding the psychological processes motivating coupon use and bargain hunting can be instrumental in improving the efficacy of promotional expenditures and suggests the following research questions:

Do males and females hold different attitudes toward bargain hunting and coupon use?
What underlying attitudinal factors might explain any attitudinal differences?
Do attitudinal differences vary by age?

METHOD

A two-stage sampling process was used to select adults for the study. In the first stage, a small number of business students from a large southern university in the USA were recruited to complete the survey. In the second stage, students from a marketing research class were enlisted to administer the questionnaire to non-student adults based on designated gender and age quotas. Because of the dearth of male-based studies, the male to female ratio was approximately 4 to 1. Equal numbers of respondents were in each of the two age groups. The data reported here are based on the resulting sample of 535. For roughly 20% of the completed surveys, respondents were re-contacted to verify their participation and ensure proper research techniques were followed.

Sample members completed a questionnaire asking about their level of agreement or disagreement with twenty-five attitude statements about coupon use and bargain hunting. The majority of items were either adopted directly or modified from the work of Lichtenstein et al. (1990), Babakus et al. (1988), and Wells & Tigert (1971). A five-point Likert scale was used, ranging from "strongly agree" to "strongly disagree." Items classifying respondents on gender and age were also included.

The twenty-five attitude statements were subjected to a principal components factor analysis with Varimax rotation. Using a .30 loading as a criterion for inclusion, the factor analysis revealed five distinct factors having eigenvalues greater than 1.0, representing over 61 percent of the total variance. Attitude items were also compared across age and gender groups with cross-tabulations, using Chi-square analysis as a test of differences. An initial review of the cross-tabulations revealed that many had more than 20% of cells with an expected value less than five. To overcome this limitation, we collapsed categories, resulting in three rating points: *strongly agree/somewhat agree*, *strongly disagree/somewhat disagree*, and *neither agree nor disagree.* For similar reasons, age categories were collapsed to *>40* and *40+*.

FINDINGS AND DISCUSSION

In looking across twenty-five attitude statements about bargain-seeking behavior, we found that males and females differ in their opinions for just fewer than half of the statements (see Table 1). In general, females continue to be more inclined to engage in bargain shopping and view using coupons more positively.

Table I: Attitudinal Factors Related to Male and Female Attitude Differences
(% who "Somewhat" or "Strongly" Agree)

Item	Male	Female	Factor
I shop a lot for specials***	71.4	91.2	Price
Collecting coupons is too much trouble**	58.7	55.9	Time

Table I: Attitudinal Factors Related to Male and Female Attitude Differences
(% who "Somewhat" or "Strongly" Agree)

Item	Male	Female	Factor
I enjoy clipping, organizing and using coupons***	19.1	25.7	Time
I don't use coupons because they are not convenient to keep with me	56.0	46.6	Time
I usually check the prices even for inexpensive items	78.9	87.4	Price
The time spent collecting coupons is not worth the money saved**	39.1	31.1	Time
A person can save a lot of money by shopping for bargains	84.2	89.3	Smart
It is embarrassing to be seen using coupons***	10.8	3.9	P/Image
A person can save a lot of money by using coupons	71.7	79.4	Smart
I am too busy to collect coupons	49.9	52.5	Time
Clipping, organizing and using coupons is not fun**	63.7	51.0	Time
I don't hesitate to use coupons, even if I 'm with others**	56.2	68.9	Price
Collecting coupons is a good use of time	31.6	30.1	Time
I usually don't remember to take coupons with me when I go shopping**	64.6	61.2	Time
I usually pay attention to sales and specials**	83.1	93.2	Price
There is no satisfaction in using coupons for small savings	34.4	22.5	P/Image
It's too much trouble to take coupons with me when I go shopping	47.8	39.8	Time
Coupons are great for people on a budget	77.7	79.6	Smart
Clipping, organizing and using coupons has become a habit with me	17.4	25.2	Time
People who use coupons look cheap***	10.1	5.9	P/Image
Clothing, furniture, appliances…whatever I buy I shop around for the best prices	82.6	84.5	Price
It is a hassle to cut out, maintain and redeem coupons**	54.3	52.4	Time
Coupons can save you a lot of money	69.6	70.3	Smart
I'm more likely to use coupons to try new brands than to buy my usual brand**	33.1	49.5	Flexible
I'm more likely to go to a store when they offer coupons.	27.2	40.8	Flexible

*Chi-square analysis indicated significant differences between males and females at p< .01*** or p< .05.** Only the "strongly agree/somewhat agree" statistics are reported.*

Large Majorities Agree

While there are some significant differences based on gender, there are also many similarities. The findings reveal over seventy percent of both males and females *shop a lot for specials, shop around for the best prices on whatever they buy, usually pay attention to sales and specials,* and *usually check prices even for inexpensive items*; both groups agree *a person can save a lot of money*

by shopping for bargains and using coupons and agree *coupons are great for those on a budget*. The major focus of the items is a belief in the importance of obtaining price-related bargains, whether through shopping efforts, bargain vigilance, or using coupons.

In addition, a majority of both groups agrees that *collecting coupons is too much trouble*, that *clipping, organizing and using coupons is not fun,* and *that it is a hassle to cut out, maintain and redeem coupons*. A majority *does not hesitate to use coupons even when with others, usually does not remember to take coupons with them when they go shopping*, and believes *coupons can save a person a lot of money*.

Female Attitudes Stronger than Male Attitudes

A factor analysis of the 25 items revealed five underlying factors. These factors suggest possible motives underlying attitudinal differences between males and females (see Table 2). A significantly larger percentage of females than males agreed with five of the attitude statements related to coupon use and bargain hunting included in this study. Three of these attitude items loaded on the *price sensitive* factor: *I shop a lot for specials* (91% vs. 71%), *I don't hesitate to use coupons even if I am with others* (69% vs. 56%), and *I usually pay attention to sales and specials* (93% vs. 83%). The *price sensitive* factor implies a heightened awareness of the price of products. Generally, consumers who are price sensitive perceive a greater need for saving money. The need perception might come from a larger family size or an increased awareness of inflationary pressures (Babakus et al., 1988). For whatever reason, females continue to be more price sensitive than their male counterparts.

While relatively few of either group seems to *enjoy clipping, organizing and using coupons*, significantly more females than males agree they do (26% vs. 19%). This item is included in the *time focused* factor. Work by McEnally and Bodkin (2001) suggests conserving energy and gaining convenience are inherent in the time factor. It is suggested that if an action cannot be accomplished with minimal time and effort, consumers become frustrated. This finding suggests that females are more likely than males to find this activity a good investment of time.

Finally, almost half (49%) of females, compared to 33% of males, agree they are *more likely to use coupons to try new brands than to buy their usual brand*. This item loaded on a factor that seems to describe *flexible shoppers*. Flexible shoppers are characterized as those who are less likely to continue with routine behavior and are open to changing their shopping behavior to take advantage of an opportunity to try something new. Indeed, these females appear to be more flexible with their shopping patterns than were male respondents in this study.

Table 2: Factor Loadings for Male/Female Attitudes	
Item	Factor Loading
Factor 1 – Time Focused	
Collecting coupons is too much trouble	.734
I enjoy clipping, organizing and using coupons	.468
I don't use coupons because they are not convenient to keep with me	.708
The time spent collecting coupons is not worth the money saved	.536
I am too busy to collect coupons	.795
Clipping, organizing and using coupons is not fun	.707
Collecting coupons is a good use of time	.412
I usually don't remember to take coupons with me when I go shopping	.693
It's too much trouble to take coupons with me when I go shopping	.689
Clipping, organizing and using coupons has become a habit with me	.589
It is a hassle to cut out, maintain and redeem coupons	.773
Factor 2 – Price Sensitive	
I shop a lot for specials	.682
I usually check the prices even for inexpensive items	.631
I don't hesitate to use coupons, even if I 'm with others	.410
I usually pay attention to sales and specials	.683
Clothing, furniture, appliances…whatever I buy I shop around for the best prices	.744
Factor 3- Pride/Image Oriented	
It's embarrassing to be seen using coupons	.806
People who use coupons look cheap	.829
There is no satisfaction in using coupons for small savings	.464
Factor 4 – Smart Shopper	
A person can save a lot of money by shopping for bargains	.606
A person can save a lot of money by using coupons	.810
Coupons are great for people on a budget	.404
Coupons can save you a lot of money	.686
Factor 5 – Flexible Shopper	
I'm more likely to use coupons to try new brands than to buy my usual brand	.673
I'm more likely to go to a store when they offer coupons	.699

Male Attitudes Stronger than Female Attitudes

Significantly more males than females somewhat or strongly agree with seven of the twenty-five attitude statements. Interestingly, five of these items load on the *time focused* factor, while the remaining two express *pride/image* concerns. The *pride/image* factor includes the desire to gain an economic advantage (Schindler, 1984), as well as to look good in front of others. The concern that coupon use and bargain hunting will be perceived negatively by others can lead to a negative self-perception—that is, as cheap and/or poor. On the other hand, positive social impressions provide self-esteem and promote positive social interactions (Baumeister & Leary, 1995). Ashworth et al. (2005) found that coupons can be more stigmatizing and generate more negative self-perceptions than other price reduction promotions, apparently because they suggest more pre-meditation and effort. They also found price rewards can lead to both a positive outcome, in that it makes the consumer feel they have gotten a bargain (*pride*), and a negative outcome, as they also perceive themselves to be "cheap" (*image*).

In general, a majority of males believes *clipping, organizing and using coupons is not fun*, *collecting coupons is too much trouble*, *it's a hassle to cut out, maintain, and redeem coupons*, and *do not usually remember to take coupons with them when they go shopping*. In addition, more males than females agree *time spent collecting coupons is not worth the money saved*. All of these items loaded on the *time focused* factor, whereas the remaining two significant differences relate to *pride/image*. While the overall agreement is not high for either group, significantly more males than females *agree* it is *embarrassing to be seen using coupons* (10.8% vs. 3.9%) and *makes one look cheap* (10.1% vs. 5.9%).

Male/Female Attitude Differences Based on Age

In addition to the significant differences in attitudes found between the total sample of males and females, further analysis revealed some of these differences are reflected in age variations (see Table 3). For male respondents, the significant differences loaded on three factors—*time focused, smart shopper*, and *pride/image*. For females, the differences between the under forty and forty-plus age groups were primarily *time focused*, with one difference related to the *smart shopper* construct. The "smart shopper" construct is one in which getting a price deal allows the consumer to communicate economic savvy to others or gain social recognition as a good shopper (Chandon et al., 2000; Bagozzi et al., 1992), as well as build self-esteem.

Table 3: Male and Female Attitudes toward Coupon Use and Bargain Hunting Based on Age
(% who "Somewhat" or "Strongly" Agree)

Item	<40M	40+M	<40F	40+ F
I shop a lot for specials	71.6	71.2	88.1	95.3
Collecting coupons is too much trouble	65.5	52.7**	64.4	44.2**
I enjoy clipping, organizing and using coupons	17.6	20.5	20.7	32.6
I don't use coupons because they are not convenient to keep with me	59.3	53.1	59.3	29.5***
I usually check the prices even for inexpensive items	78.2	79.6	86.4	88.6
The time spent collecting coupons is not worth the money saved	43.2	35.6***	33.9	27.3
A person can save a lot of money by shopping for bargains	84.0	84.4	86.4	93.2
It is embarrassing to be seen using coupons	7.7	13.6*	3.4	4.5
A person can save a lot of money by using coupons	72.3	71.2***	74.1	86.4**
I am too busy to collect coupons	52.0	48.0	63.8	37.2***
Clipping, organizing and using coupons is not fun	65.8	61.9	55.2	45.5
I don't hesitate to use coupons, even if I 'm with others	52.3	59.6**	61.0	79.5
Collecting coupons is a good use of time	26.4	36.2**	27.1	34.1
I usually don't remember to take coupons with me when I go shopping	61.7	67.1**	67.8	52.3
I usually pay attention to sales and specials	82.7	83.4	93.2	93.2
There is no satisfaction in using coupons for small savings	32.5	36.2***	25.9	18.2
It's too much trouble to take coupons with me when I go shopping	47.2	48.2	11.9	20.5
I usually buy the same brands when shopping for groceries	67.5	71.6	91.5	81.8
Coupons are great for people on a budget	72.1	82.6***	81.4	77.3
Clipping, organizing and using coupons has become a habit with me	14.9	19.6	13.6	40.9***
People who use coupons look cheap	10.3	9.9***	6.8	4.8
Clothing, furniture, appliances…whatever I buy I shop for the best prices	79.7	85.2	83.1	86.4
It is a hassle to cut out, maintain and redeem coupons	53.8	54.7	57.6	45.5
Coupons can save you a lot of money	69.6	69.5	66.7	75.0
I'm more likely to use coupons to try new brands than to buy my usual brand	34.0	32.3	44.1	56.8
I'm more likely to go to a store when they offer coupons.	26.9	27.4	37.3	45.5

*Two age groups: under 40; 40 and over. Chi-square analysis indicated significant differences at p< .01*** p< .05,** or p< .07.* Only the "strongly agree/somewhat agree" statistics are reported.*

The *time focused* attitudes held by significantly *more* young males include *collecting coupons is too much trouble*, and *the time spent collecting coupons is not worth the money saved*. However,

more older males agree *collecting coupons is a good use of time*, and *I usually don't remember to take coupons with me when I go shopping*.

Of those items loading on the *pride/image* factor, *more* older males agree *I don't hesitate to use coupons even when I am with others* and *there is no satisfaction in using coupons for small savings*. *More* younger males agree *people who use coupons look cheap.*

Finally, two of the significant differences between younger and older males in the study relate to the *smart shopper* construct. *More* younger males agree *a person can save a lot of money by using coupons*, and *fewer* believe *coupons are great for people on a budget*.

Younger and Older Females

Significant differences were also found in the attitudes of younger and older females toward coupon use and bargain hunting. Four of the five differences were *time focused*. A *greater* percentage of younger females agree *collecting coupons is too much trouble*, *I don't use coupons because they are not convenient to keep with me*, and *I am too busy to collect coupons*. In addition, *fewer* females forty and under agree *clipping, organizing and using coupons has become a habit with me*. Finally, *fewer* younger females agree with the *smart shopper* attitude statement *a person can save a lot of money by using coupons*.

While most of the significant age differences found were specific to gender, there was one attitude held more strongly by both younger groups. A greater number of younger consumers, regardless of gender believe *collecting coupons is too much trouble*.

CONCLUSIONS AND MANAGERIAL IMPLICATIONS

Based on the findings of this study, large majorities of both males and females believe bargain-hunting leads to economic rewards and is, therefore, a smart thing to do; in fact, these large majorities state they engage in a variety of bargain shopping activities. Such behaviors are more common for females than males, as indicated by the significantly larger percentage of females who use coupons and state they are vigilant in looking for sales and specials in addition to being more willing to alter their routine to take advantage of a bargain. Based on these differences, females appear to be more price-sensitive and flexible shoppers. However, while consumers believe coupon use can save one money and is good for those on a budget, few respondents (fewer males than females) enjoy the process or find it convenient enough relative to rewards gained. In this study, at least, it appears that the tradeoff costs of using coupons are too great for most people today.

Supporting our original hypothesis that changing household structures in the U.S. have led to more parity between the sexes with respect to shopping activity is the finding that few males or females believe using coupons is embarrassing (11% vs. 4%) or makes one appear cheap (10% vs. 6%), although significantly more males view the activity negatively. However, contrary to our

supposition of changing attitudes, older men, who are more likely to believe in more traditional gender roles, were significantly less likely to agree it is embarrassing to be seen using coupons (8% vs. 14%). Furthermore, males age 40+ were more likely to disagree that people who use coupons look cheap (74% vs. 61%). Based on previous studies suggesting males consider coupon involvement a "feminine" activity, one might have assumed that price deals targeted to males would be more effective were the offers more covert—online offers, store loyalty cards, etc. However, based on our findings that coupon use by both males and females is hampered more by the time and effort required rather than being perceived as an indicator of either "femininity" or "cheapness," such tactics would not seem warranted when distributing coupons to the male market.

While females in this study seemed more price sensitive than their male counterparts, male respondents were more concerned with the time and image implications of bargain-related behaviors, particularly coupon use. As has been noted, only small percentages of males and females perceive the public use of coupons as a negative reflection on themselves. However, the time variable seems to gain in significance for men, as reflected in their assessment that the process is a hassle and not worth the trouble, but also instructive is the statement that they do not usually remember to take coupons with them. It's interesting to note that females might readily keep coupons convenient in their purses while males would need to be more deliberate in planning to have the coupons handy when needed. Although there are significant attitudinal differences between males and females, the coupon "habit" does not seem to be well established with either group in today's fast-paced, time-compressed environment.

When considering age variations, it appears younger males are less likely to see "couponing" as a satisfying or good use of time relative to any economic gains they might receive, as they are less likely than older males to believe coupons are a significant money-saving tool. On the other hand, older females, the most likely to use coupons, have had more time than younger females to develop the coupon habit over the years and perhaps have developed a system for accessing and collecting them. This might be the reason they are less likely than younger females to state they are too busy or that the process is too much trouble—also believing the time spent is worth the money saved. One might assume that females 40+ particularly those over 50, are not quite as time-starved, as their children are grown and careers more stable.

For all of the reasons indicated by the findings of this study, continued use of traditional methods of distributing and redeeming coupons seem likely to show diminishing returns for those companies dependent on this tactic—particularly as the population ages and younger people are less likely to develop the traditional coupon habit. Already we can see a shift toward the use of "promotional codes" for online purchases and the significance of store loyalty cards as a means of receiving price discounts, particularly in the purchase of groceries, and particularly among the young. Advances in technology allow companies to use purchasing data stored on loyalty cards to target relevant coupons to individual consumers and could potentially be used to send coupons directly to the loyalty card. Consumers could swipe the card on entering the store to see what coupons are

available to them. A second possibility is expanding the application of promotional codes to purchases beyond the Internet. Any approach that reduces the effort and planning required by consumers is likely to result in improved consumer participation.

Companies have long recognized that coupon promotions have a large waste factor due to low redemption rates. Growing environmental concerns also place the spotlight on the volume of paper involved in mass couponing. The results of this study support the need to create additional alternatives to the traditional clip, save, and redeem coupon that will offer greater incentives to both male and female consumers in convenience, ease of use, and perhaps greater savings.

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BUILDING QUALITY INTERNAL EXCHANGE: THE ROLE OF THE ORGANIZATION AND THE INDIVIDUAL IN INTERNAL CUSTOMER ORIENTATION

Ashley J. Kilburn, University of Tennessee at Martin

ABSTRACT

In order to establish high levels of internal customer orientation, firms will implement internal marketing programs. As with any other program implementation, there will be those individuals who strongly offer their support and are strongly internally customer oriented, while others may have no reaction to the program, and still others may react negatively to the program displaying resistance or frustration with its tenants. Is this variation in ICO among employees due to their personal characteristics? Or are there actions the organization can take in order to help boost ICO in the firm? This study will examine two main sources of ICO implementation motivation: organization-controlled (decision-making centralization, integration of communication across departments, reward structure and upper-management commitment) and individual variables (customer orientation and organizational tenure) to determine the extent to which an employee's ICO can be facilitated by the organization for which they work.

Data collected from a 51 employees of a Southeast division of a medical manufacturer exhibit impact these antecedents have on how internally customer oriented employees are capable of being. Results reveal one antecedent path to employee ICO is statistically significant with a t-value >2.0: a positive link from upper-management commitment (3.61) to ICO. Therefore, internal customer orientation is primarily influenced by the commitment displayed by upper-management regarding formalized internal marketing support. Path analysis reveals that the antecedents account for approximately 34% of the variance in employee ICO. Results suggest that an employee's customer orientation, organizational tenure, the degree of organizational decision-making centralization and the supplier's perception of the reward structure do not have a significant impact on the degree to which they are internally customer oriented.

INTRODUCTION

Internal customer orientation (ICO) is defined as a mindset in which internal providers of services treat current or potential users of those services as customers with whom transactional and relational exchange is sustained through behavioral or attitudinal exhibition of marketing

philosophies, theories, and practices (Kilburn, 2006). The degree of internal supplier ICO is hypothesized to stem from two main sources: individual characteristics, as well as organization-controlled variables. The resulting degree of ICO, in turn, has shown positive impacts on internal customers such as improved job satisfaction, job embeddedness, as well as improved quality of relationship with internal exchange partners, thus lowering internal customer intentions to voluntarily turnover (Kilburn, 2006).

Kohli and Jaworski (1990) present three main areas from which determinants of behavior stem: individual, intergroup and the organization. Past research on organizational change implementation also suggests that individual or internal factors, in addition to organizationally-controlled or external factors, contribute to the extent to which one adapts to change (Kwon and Zmud,1987). Kwon and Zmud (1987) suggest that job tenure is negatively related to an individual's adoption of change. When a formal internal marketing program is implemented inside an organization, the formal internal exchange between internal suppliers and customers is outlined by formalized communication efforts, internal market training, goal synchronization and exchange terms. More specifically, reward structure-performance alignment, decision-making centralization, and the degree of integration or horizontal communication and the commitment demonstrated by upper-management regarding the program may significantly lead to an ICO.

INDIVIDUAL CHARACTERISTICS

Some individuals may be more or less internally customer oriented than others. Organization-controlled activities and programs do not easily explain this variation in ICO, as they are typically uniformly administered to all employees. Authors who examine customer orientation in its external form, or that examining the relationship between employees, typically salespersons and their external customers suggest that individuals are naturally more or less likely to adopt such an orientation (Brown, Mowen, Donavan and Licata, 2002; Donavan, Brown and Mowen, 2004). Donavan, et al (2004) define customer orientation as a "tendency or predisposition to meet customer needs" (p. 129). The authors treat customer orientation as a surface-level trait, or a tendency displayed in circumstances where the appropriate environmental factors are present.

Customer Orientation

Donovan, et al (2004) considers individuals to be customer oriented if they have a "predisposition to meet customer needs in an on-the-job context" (p. 129). They define customer orientation as a context specific or disposition stemming from basic personality traits. Therefore, one's degree of customer orientation results from the interaction of individual variables such as personality with environmental variables such as one's function within the organization.

As a result of their conceptualization, they define customer orientation as a higher-order construct comprised of four dimensions: (1) an individual's need to pamper a customer, (2) an individual's need to read customer needs, (3) an individual's need for personal relationships, and (4) one's need to satisfactorily deliver the intended service. The authors define the need to pamper as the desire to make one's customers feel unique or special. One's need to identify and interpret customer needs reflects the desire to notice both express and implicit communication. Likewise, one has a need to form personal relationships to the extent that one desires to intimately connect with his or her customers. Finally, those with a high need to deliver service successfully desire to perform service-related tasks effectively.

Outside a naturally occurring personality trait, Donovan et al (2004) maintain that individuals do not carry a need to satisfy others. The authors suggest future investigation of organizational training's long-term impact on an individual's customer orientation. Their perspective omits the possibility that an individual can learn to be customer oriented despite traits they may not possess. Here, it is examined whether or not the need to pamper, read customer needs, form personal relationships or deliver satisfactory service is actually personality-driven or whether they can be fostered through organizational activities. Therefore, a positive relationship proposed to exist between an internal supplier's customer orientation and their degree of ICO.

H1a: The greater an internal supplier's customer orientation, the greater their degree of internal customer orientation.

Organizational Tenure

As two peers within an organization socialize and work together, they form a relationship schema. Soloman et al (1985) suggest that extensive role-player experience makes the integration of radical changes into the schema more difficult. Doney and Cannon (1997) state "when exchange relationships have a history, the outcomes of previous business episodes provide a framework for subsequent interaction" (p. 40). Therefore, the parties in a relationship utilize past knowledge regarding their exchanges as predictive criteria for psychological contract terms (Soloman et al, 1985).

It seems natural that organizational tenure has been shown to have a significant negative relationship with the adoption of innovation (Sharma and Rai, 2003). As individuals remain in an organization for a significant period of time, they become resistant to change due to their increased psychological commitment to organizational norms (Staw and Ross, 1980; Stevens, Beyer and Trice, 1978). Sharma and Rai (2003) suggest that the ability to generate new ideas and adopt new practices is decreased over time. Therefore, a negative relationship between organizational tenure and ICO is hypothesized:

H1b: The longer an internal supplier's tenure in an organization, the less their internal customer orientation.

ORGANIZATIONAL CHARACTERISTICS

Centralization and Integration

Relationship marketing provides an alternative framework to its transaction-based predecessor. Likewise, in the management field, internal customers (employees) were treated as easily replaceable commodities. Employees maintained a very specialized area of expertise, and were not encouraged to communicate or participate in organizational decision-making. Here, organizations focused primarily on profitability when measuring their success among customers (Kotler, 1988; Borden, 1964; McCarthy, 1960). However, as organizations began to assume flatter, more decentralized structures (placing a larger number of employees on the organizational boundary) employee communication became more critical along with inter-functional integration and involvement in decision-making.

Centralization of decision-making refers to the degree to which decisions are made by upper-management with limited or no input from others within the firm. Integration is considered here as the degree of interaction among departments or groups within an organization (Grover, Fiedler and Teng, 1999). Organizations exhibiting a high degree of centralization may be categorized as mechanistic by Bums and Stalker (1961). Mechanistic firms are noted for lower degrees of communication, and more specifically, lower degrees of informal communication as opposed to organic firms.

Consequently, mechanistic firms, or those exhibiting high levels of centralization, traditionally also have low levels of integration between departments. As a result, these types of organizations are less likely to be innovative (Damanpour, 1991) than their decentralized, more integrated counterparts. Conversely, those firms with high levels of informal communication and decentralized decision-making systems are noted for considerable integration between departments.

Since ICO involves sustaining exchange and relationships across time, it is important that internal suppliers feel they have some control over decisions regarding them or their customers. Organizations with a centralized structure where a select few participate in decision-making will alienate internal suppliers, leave their internal suppliers with a negative perception of internal marketing, thus decreasing their ICO.

H2a: The greater the decision-making centralization within an organization, the less the internal supplier's internal customer orientation.

An ICO is largely based on internal supplier's ability to freely exchange information both within and across groups in order to optimally serve internal customers. If that is difficult given the structure of the organization, suppliers will be less likely to have an ICO. Therefore, the following hypothesis is presented:

> *H2b: The greater the degree of integration between departments within an organization, the greater the internal supplier's internal customer orientation.*

Reward Structure and Upper-Management Commitment

A major part of any organizational effort is the checks-and-balances system put in place to monitor the success or failure of the internal marketing effort. In the case of an internal marketing program, customer-provided performance ratings of the supplier, provide the supplier's supervisor with criteria upon which to provide rewards (Hauser, et al 1996). It is the customer's provision of such feedback or rating that prolongs the reciprocal exchange process between themselves and their supplier. In return, customers expect timely, consistent, courteous service from their supplier. Thus, the reciprocity continues. As a result of supplier ICO, both internal customers and suppliers expend extra amounts of energy, time and resources on their current exchange as well as potential exchanges that may take place in the future.

As potential internal suppliers perceive a lack of support from upper-management regarding internal marketing program implementation, or an absence of ICO-related criteria in the reward structure, they will views costs to be greater than benefits. Therefore, suppliers will show greater resistance in adopting ICO.

Those responsible for implementing the internal marketing program must design appropriate reward structures before suppliers will exhibit high levels of ICO. In addition to aligning ICO-related criteria with reward structures, upper-management must also demonstrate formalized commitment of the internal marketing program through efforts such as internal marketing training, program implementation assistance, and departmental resource allocation. In other words, if internal suppliers view the degree to which they adopt ICO as a driver of budget allocations, increased efficiencies, decreased monitoring costs, the extent to which they adopt ICO will increase. Outside the social ramifications of adopting the "supplier" role, economic considerations stipulate that there must be significant financial incentive to cooperate. If the incentive (i.e., benefits) does not outweigh the costs, then the employees will show resistance in adopting an ICO.

> *H2c: The inclusion of internal marketing-based criteria in the organizational reward structure will increase the internal supplier's internal customer orientation.*

H2d: The greater upper-management commitment, the greater internal supplier's degree of internal customer orientation.

DATA COLLECTION AND MEASURES

Fifty-one (51) employees in a Southeast division of an international medical manufacturer responded to an online survey. These employees were identified because they provided a good or service to another employee of the organization, thus qualifying them to be considered internal suppliers.

Each employee provided responses based on their internal customer group in their self-report of ICO. Employees responded to an adapted version of Donavan, et al's 2004 customer orientation scale. The employee's perception of upper-management commitment was assessed using a newly-developed 5-item scale assessing the degree to which suppliers were encouraged through formalized efforts such as training, resource allocation, reward systems or program implementation assistance. The measure exhibited sufficient reliability (α = .89). Employee tenure was assessed by a 1-item measure asking respondents to indicate the period of time for which they have been employed by the organization. The degree of centralization within the organization was captured from suppliers using a 6-item scale from Grover, Fiedler and Teng (1999). A 5-item measure from Grover, Teng and Fiedler (1993) was used to assess supplier perception of organizational integration, or degree to which departments within the organization shared information or decision-making responsibilities. Sarin and Mahajan's (2001) 5-item scale for outcome and process-based reward structure was used (α = .63 and .69, respectively).

RESULTS

LISREL 8.51 was used to assess the impact of the antecedents on the employee's internal customer orientation. Path analysis revealed a model which showed moderate fit to the data: χ^2 = 22.65 (df = 6)(p-value = .0009), RMSEA = .22, NFI =.76, NNFI = .-.20, GFI = .92, CFI = .74, AGFI = .50). Results are summarized in Table 1. Results reveal one antecedent path to supplier internal customer orientation that is statistically significant with a t-value >2.0: a positive link from upper-management commitment (3.61) to ICO. Therefore, H2d is supported as supplier internal customer orientation is primarily influenced by the commitment displayed by upper-management regarding formalized internal marketing support.

Alternatively, path results reveal a negative link from integration to ICO (-2.03). Given the opposite expected direction of the path of H2b and no indication in the correlation matrix that integration is negatively related to any other constructs, further analysis was run. Since this result was somewhat surprising, further examination using linear regression of all antecedent variables revealed the standardized coefficient of integration as positive and non-significant. Therefore, the

negative standardized coefficient and t-value for integration in the path model suggests that the result is some artifact with the data analysis technique. As a result, it is difficult to speculate regarding the linkage between integration and supplier ICO outside the fact that it was found to be insignificant.

Table 1: Model Parameter Estimates and Goodness of Fit Statistics (N = 51)				
Hypothesis	Model Parameters	Standardized Estimate	t-value	R^2
H1a	Customer Orientation→ICO	.09	.79	
H1b	Tenure→ICO	.01	.15	
H2a	Centralization→ICO (-)	.10	1.53	
H2b	Integration→ICO	-.16	-2.03	
H2c	Reward Structure→ICO	.01	.16	
H2d	Upper-Management Commitment→ICO	.64	3.61	.34
Goodness-of-Fit Statistics:				
$\chi 2$ = 22.65 (df = 6) (p-value = .001)				
RMSEA = .22				
NFI = .76				
NNFI = -.20				
CFI = .74				
GFI = .92				
AGFI = .50				
t-values $\geq$2.0 indicate a significant coefficient. R^2 indicates the proportion of variance accounted for in each depended construct.				

DISCUSSION AND IMPLICATIONS

Results reveal one antecedent path to employee ICO is statistically significant with a t-value >2.0: a positive link from upper-management commitment (3.61) to ICO. Therefore, internal customer orientation is primarily influenced by the commitment displayed by upper-management regarding formalized internal marketing support. Path analysis reveals that the antecedents account for approximately 34% of the variance in employee ICO. Results suggest that an employee's customer orientation, organizational tenure, the degree of organizational decision-making centralization and the supplier's perception of the reward structure do not have a significant impact on the degree to which they are internally customer oriented. It is therefore recommended that organizations make formalized efforts to emphasize the importance of internal customer orientation to its employees.

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THE RECOVERY PARADOX: THE EFFECT OF RECOVERY PERFORMANCE AND SERVICE FAILURE SEVERITY ON POST-RECOVERY CUSTOMER SATISFACTION

Michael A. McCollough, University of Idaho

ABSTRACT

Research suggests that the greater service failure severity the greater the recovery performance necessary to convert the customers' dissatisfaction into satisfaction and the more difficult it should be for the service provider to achieve full recovery (Magnini, Ford, Markowski, and Honeycutt 2007; Mattila 1999; McCollough, Berry, and Yadav 2000; Smith and Bolton 1998; Sundaram, Jurowski, and Webster 1997; Weim, Beatty, and Jones 2004). This research investigates the recovery paradox, the proposition that superior recovery can leave the customer as satisfied, if not more satisfied, than if nothing had gone wrong (McCollough and Bharadwaj 1992) by examining the impact of service failure severity and the recovery performance on post-recovery satisfaction. This research answers the call for future research investigating service failure severity (Matos, Henrique, and Rossi (2007) extending previous research on post-recovery satisfaction and the recovery paradox. Findings show that for a recovery paradox to emerge the service failure severity must be very modest and the recovery effort superior. Indeed, the relative low level of harm caused by the failure and the relatively high recovery performance necessary is surprising and indicates that the recovery paradox may be a rather limited phenomenon.

INTRODUCTION

Services fail, and fail often (Fisk, Brown and Bitner 1993). Indeed, due to the unique nature of services, failure is both more common than goods failure and inevitable (Chung and Hoffman 1998; Fisk, Brown, and Bitner 1993). With the realization of the importance of relationship marketing (Berry 1983; Gummersson 1987) and the understanding that it generally costs far more to replace than keep an existing customer (Reicheld and Sasser 1990), researchers have turned their attention to understanding service recovery - the actions a service provider takes in response to a service failure (Andreassen 1999; Boshoff 1999; Chung and Hoffman 1998; Gronroos 1988; Matos, Henrique, Rossi 2007; Spreng, Harrell, and Mackoy 1995; Smith and Bolton 1998; Sundaram, Jurowski, and Webster 1997; Tax, Brown, and Chandrashekaran 1998).

This research investigates the *recovery paradox* (Matos, Henrique, and Rossi (2007; McCollough, Berry, and Yadav 2000; McCollough and Bharadwaj 1992; Smith and Bolton 1998), or the proposition that superior recovery can leave a customer as satisfied, if not more satisfied, than if nothing had gone wrong, by investigating the post-recovery satisfaction of consumers following service failures of differing degrees of harm (often referred to as the magnitude or severity of the service failure) and recoveries of varying degrees of superiority. In their meta-analysis of the recovery paradox Matos, Henrique, and Rossi (2007) note that failure severity was one of the moderators most likely to account for a recovery paradox but which they were unable to evaluate because of a lack of published studies. Therefore Matos, Henrique, and Rossi called on researchers to investigate failure severity further.

The idea of a recovery paradox is of interest because, if accepted as true, service managers might not strive to identify and eliminate all sources of service failure, rationalizing instead that a problem actually might create more of an opportunity than if there had been no service failure initially. Such a position would be at stark odds with the work of TQM researchers who stress the importance of identifying and eliminating all potential sources of failure prior to the consumption experience (Crosby 1979; Deming 1986).

Secondly, the recovery paradox provides a litmus test against which the potential and limits of recovery to convert dissatisfied customers into satisfied customers must be considered. For instance, support for a recovery paradox would imply firms should concentrate resources on assuring superior recovery while a lack of support for the recovery paradox would argue that firms should place the emphasis on avoiding service failures and achieving high service quality through high service reliability.

Finally, the recovery paradox is also of interest from a theoretical perspective. To truly understand the recovery paradox a theoretical explanation must be provided and tested. This test, in turn, will broaden our theoretical understanding of service failure and recovery.

THE ANTECEDENTS OF POST-RECOVERY SATISFACTION

Recovery Performance

In examining post-recovery satisfaction researchers most commonly have focused on recovery performance, employing a variety of theoretical perspectives (Matos, Henrique, And Rossi 2007; Boshoff 1999). Some have considered recovery performance against expectations in a classic disconfirmation perspective (Oliver 1981; McCollough, Berry, and Yadav 2000; Singh and Widing 1991). Others have evaluated elements of perceived distributive, procedural, and interactional justice (Goodwin and Ross 1992; Hocutt, Chakraborty, Mowen 1997; McCollough, Berry, and Yadav 2000; Tax, Brown, and Chandrashekaran 1998). Attributions also have been examined as they influence recovery expectations and performance (Folkes 1984; McCollough 2000; Smith and Bolton 1998).

Not surprisingly, a consistent and uniform finding, regardless of the theoretical perspective employed, has been that the higher the level of recovery performance the greater the post recovery satisfaction. For instance, satisfaction will be greater if an apology is offered than if it isn't (Goodwin and Ross 1992; Smith and Bolton 1998). Likewise, greater monetary or other tangible compensation will lead to greater post-recovery satisfaction (Smith and Bolton 1998; Tax, Brown, and Chandrashekaran 1998). Therefore, replicating previous studies it is proposed here that the greater the recovery performance the greater the post recovery satisfaction.

Therefore:

> *H_1: The higher (lower) the recovery performance the higher (lower) the post-recovery satisfaction.*

Severity of the Service Failure

A limited number of studies have investigated what researchers variously refer to as the severity, magnitude, or the harm of the service failure. This research generally shows that the greater the severity of the service failure the lower the post recovery satisfaction (Weun, Beatty, and Jones 2004). However the number of studies that evaluate harm in the context of the recovery paradox is so small that Matos, Henrique, and Rossi (2007) were unable to include service failure severity as a moderator in their meta-analysis of the recovery paradox and call for future research on this variable.

In general, the greater the severity of the service failure the greater the customer's dissatisfaction (Mattila 1999; Magnini, Ford, Markowski, Honeycutt 2007; McCollough, Berry, and Yadav 2000; Smith and Bolton 1998; Webster and Sundaram 1998; Weun, Beatty, and Jones 2004). For instance, a three-hour delay for an airline passenger generally would be expected to lead to greater dissatisfaction than a thirty-minute delay. In addition, the severity or the harm caused by the failure can influence the type of recovery necessary to mitigate the customer's dissatisfaction, such as whether the consumer will expect an apology or demand compensation. For instance, all things being equal, a customer will expect some compensation from the service provider if the service failure resulted in a financial loss than if it did not.

At the extreme are situations in which no matter what the recovery performance might be, it is impossible to make the customer whole again because of the damage or harm caused by the original failure. Consider the case of a photographer who "loses" the film (or digital images) from a wedding. No matter how apologetic the photographer, no matter the compensation provided, no recovery effort can make the customer whole again. The special moment has come and gone, and there is no way to recapture the event, to truly recover.

However, in general recovery efforts can at least mitigate the damage done by the failure and may be able to convert modest customer dissatisfaction into satisfaction (Mattila 1999). For instance, a restaurant can mitigate the damage done by an improperly prepared meal by performing the service over, reducing the amount of the check, or providing a complementary drink or dessert.

As noted, relatively few students have evaluated the impact of service failure harm on post recovery satisfaction and the recovery paradox. Matos, Henrique, and Rossi (2007) single out two studies that have directly examined service failure harm or criticality. Magnini, Ford, Markowski, and Honeycutt in a between subjects research design found that the recovery paradox was most likely when the failure was not considered by the customer to be severe. However, even in their low severity situation only 45.6 percent of the respondents reported a recovery paradox effect while 54.4 did not. In the high severity situation only 14.3% of the respondents reported a recovery paradox effect. Mattila (1999) introduced the concept of criticality. For instance a service failure at a business dinner would be more critical than an identical failure for a casual dinner with a friend. In this respect there is a difference between the objective harm of a failure and the perceived failure depending on criticality. For instance, a three-hour flight delay that causes one person to miss an important meeting does much more harm than a three-hour delay for someone arriving the day before an important meeting. In this case the objective harm (length of delay) is the same while the perceived harm (whether the traveler misses an important meeting) differs depending on the criticality of the service. It would be expected that the perceived harm (or criticality) should provide greater explanatory power than the objective harm caused by the failure. Mattila (1999) in a between subjects factorial design examined criticality of consumption, magnitude of failure, and first perceiver of failure (employee or customer) and found that the only significant predictor of a recovery paradox effect was the magnitude of failure. In this case magnitude of failure refereed to the harm caused by different service failures (manipulated as not having a reserved table (high) versus bringing the customer the wrong food item (low). Mattila found that when scenarios depicted the dinner being served the wrong dish satisfaction with a recovery of a free dessert created satisfaction levels close to the control condition of no service failure but that these satisfaction levels did not exceed the no failure condition.Therefore, the initial service failure severity exerts significant influence on post-recovery satisfaction (Andreassen 1999) which the recovery effort of the service provider mitigates. Further this failure has both and objective and perceived dimension and the perceived harm (criticality) should have greater explanatory power.

H_2: The greater (lower) the objective harm caused by the failure the lower (greater) the post-recovery satisfaction.

H_3: The perceived harm caused by the failure will be a better predictor of post-recovery satisfaction than objective harm.

The Interaction of Recovery Performance and Harm

It should be clear based on this discussion that there is a possible interaction between harm caused by the failure and recovery performance, with the greater the harm caused by the failure the greater the recovery performance necessary to achieve the same level of satisfaction resulting from a lower harm failure. Researchers have found evidence which seems to indicate that the service criticality, importance, or magnitude of the failure interacted with recovery performance in determining post-recovery satisfaction (Mattila (1999), Magnini, Ford, Markowski, Honeycutt 2007; Smith and Bolton (1998), and Webster and Sundaram (1998).

> H_4: *There will be a significant interaction effect on post-recovery satisfaction between recovery performance and harm.*

The Recovery Paradox

The research that has been published on post-recovery satisfaction offers mixed support for the recovery paradox (Matos, Henrique and Rossi 2007). Some researchers report results consistent with a recovery paradox effect (TARP 1979, 1986; Morris 1988; Bitner, Booms, and Tetreault 1990; Goodwin and Ross 1992; Hart 1993; Hart, Heskett, and Sasser 1990; Smith and Bolton 1998; Triplett 1994; and Kelly, Hoffman, and Davis 1993) while others have reported results inconsistent with a recovery paradox effect (Berry, Zeithaml, and Parasuraman 1990; Bolton and Drew 1991; Fornell 1992; Halstead and Page 1992; Smart and Martin 1993; and Zeithaml, Berry and Parasuraman 1996). The conflicting results regarding the recovery paradox are likely due to the moderating variables employed and the research method (Matos, Henrique, and Rossi 2007). Due to a limited number of studies Matos, Henrique, and Rossi (2007) were unable to control for severity as a moderating variable in their meta-analysis of the recovery paradox and specifically call for more research of this variable which they believed might account for some of the inconsistency in the published research regarding the recovery paradox. Simply put, in cases of low harm in which the recovery efforts can completely address the harm caused by the failure a recovery paradox effect may emerge.

Therefore, while some service failures cause great harm which no realistic recovery effort can completely mitigate, others cause relatively little harm which can be completely mitigated.

> H_5: *Given low harm and high recovery performance post-recovery satisfaction will be as great, or greater than, the case of no service failure.*

RESEARCH METHODOLOGY

It is proposed here that a key issue regarding the conflicting findings regarding the recovery paradox is also definitional which in turn has lead to inconsistencies in research methodologies. McCollough and Bharadwaj (1992) first conceptualized the recovery paradox as post recovery satisfaction equal to or greater than if there had been no service failure to begin with. However, others conceptualize the recovery paradox as post-recovery satisfaction that exceeds pre-failure satisfaction (Matos, Henrique, and Rossi 2007). The difference in definitions is subtle but significant. McCollough and Bharadwaj (1992) focused on a transaction specific satisfaction in their definition and did not consider an overall or cumulative satisfaction measure more akin to an attitude. However, those that focus on post-recovery satisfaction that exceeds pre-failure satisfaction must be focusing on a cumulative attitudinal satisfaction by definition as they presume a pre-failure satisfaction as the bench mark. In general this definition would rule out the recovery paradox for first time users of a service. Studies that benchmark post-recovery satisfaction against pre-failure satisfaction tend to use a within subjects research design (Magnini et al. 2007; Maxham 2001; Maxham and Netemeyer 2002; Smith and Bolton 1998). Others however that focus on post recovery satisfaction greater than if there had been no failure tend to employ a between subjects approach that uses a control condition of no service failure (Mattila 1999; Hocutt, Bowers, and Donavan 2006; Kau and Loh 2006; McCollough, Berry, and Yadav 2000; Michel 2001; Ok, Back, and Shanklin 2006). Of those studies investigating harm both a within and between subject design has been employed.

This research defines the recovery paradox consistent with that first proposed by McCollough and Bharadwaj (1992) and therefore employs a between subject design employing a control condition of no service failure. Without this test, the conditions of the recovery paradox as set forth by McCollough and Bharadwaj (1992) cannot be met.

A scenario-based experiment was employed to test the research hypotheses. The use of scenarios has been established as a valid research methodology for investigating service failure and recovery (Bitner 1990; Smith and Bolton 1998; Matos, Henrique, Rossi 2007; McCollough, Berry, and Yadav 2000; Sundaram, Jurowski, and Webster 1997). The use of scenarios allows difficult manipulations to be more easily operationalized, provides a high degree of control, and avoids the expense and ethical issues that would be involved with creating an actual service failure situation (Bitner 1990). Further, as Smith and Bolton (1998) point out, there is considerable risk of response bias due to memory lapses and rationalization when surveys are utilized some time after the failure and recovery. The key drawback to scenarios is the risk of demand effects and the potential inability of respondents to accurately project how they actually would react to a given situation. Therefore, to lessen these problems of scenarios while capturing the advantages subjects were recruited who were engaged in the focal service being studied.

Research Setting

The research setting was airline travel. Because service failure is common in the airline industry (Andreeva 1998) it was believed that respondents would find manipulations regarding service failure harm and recovery performance plausible. Likewise, because most travelers, when facing a delay or cancellation of a flight, must seek redress (because canceling the trip is generally not an option) no bias was created by imposing complaining behavior on respondents that might not ordinarily complain to a service provider about a failure. In addition, in this situation, airline travel, it is possible that some subjects that are generally more anxious and otherwise emotionally involved while flying would respond differently to scenarios provided in a "laboratory setting." Therefore actual travelers were incepted while waiting to board aircraft and given the research instrument. Bitner (1990) utilized a similar technique to explore service failure in the airline industry, establishing the methodology as valid and reliable. Lastly Matos, Henrique, and Rossi (2007) reported that studies using student subjects reported a slightly higher post recovery satisfaction. This may suggest that studies that use student subjects are more likely to find a recovery paradox based on the general lack of experience of the subjects and the artificiality of scenarios imposed in a classroom or laboratory setting.

Research Design and Data Collection

A 3x2 between-subjects experimental design manipulated harm (high, medium, and low) and service performance (service failure with either high or low recovery performance or the control condition of no service failure). Under the high-harm condition the traveler encountered a delay of three hours. Under the moderate-harm condition the traveler encountered a delay of thirty minutes. Under the low-harm condition the traveler was rebooked on a different airline and arrived at virtually the same time as the originally scheduled flight. Although the traveler in the low-harm condition did not encounter a delay, this condition does involve some harm. For instance, passengers in this situation would need to transfer to another gate (perhaps carrying bags) and might need to contact family or friends to provide them with the change in plans. Under high recovery the passenger was treated very courteously and received a coupon good for 10% off the price of a future ticket or 5,000 frequent flyer points. Under low recovery the agent was indifferent and did not offer a discount coupon or frequent flyer points. Therefore, recovery performance was manipulated along three of the primary dimensions previously established in the literature as important, distributive, procedural, and interactional justice.

The data was drawn from a medium-sized regional airport in the southwest United States as part of a larger study of service failure and recovery. After obtaining the cooperation of the airport manager the primary researcher met with the managers of each carrier to review the purpose,

objectives, and research methodology and to address any concerns. In total, passengers from nine domestic carriers were sampled, reducing the dangers of any possible brand bias.

Respondents were randomly assigned to treatment conditions. Passengers were approached in the waiting area and asked to participate (most were seated). Passengers from 50 departures were included in the sample, and all carriers were represented by several departures. Observations were scattered over two weeks and were obtained for all hours of operation. In total, 237 passengers were approached and asked to participate in this study.

For passengers unable to complete and return the survey before boarding a postage-paid, addressed envelope was attached to the research instrument. The primary advantage of allowing respondents the option of returning the survey by mail was to overcome respondent objections that they would be unable to complete the survey before boarding. Further, this allowed late arrivals to be included in the research eliminating any systematic bias. Over 75% of all respondents completed and returned the survey before boarding. In addition, the method of survey return was entered into all subsequent data analysis and in no case was materially or statistically significant. Including those that chose to respond by mail, the effective response rate was 61.2%.

Results

Prior to calculating the scale reliabilities the item measures were subjected to factor analysis. Table 1 provides the specific scale items and coefficient alpha reliabilities. All questions utilized a 7-point, Likert scale anchored by Strongly Disagree - Agree with the exception of two of the satisfaction scale items which employed a 9-point scale to limit skewness (Fornell 1992) and which employed different anchors. All scales were pretested prior to the principal data collection. In addition, wherever possible existing scales were utilized or modified. However, due to the unique nature of the research some scales were developed specifically for this research. During data collection few respondents reported any confusion regarding either the scenarios or the scale items. The reliability of all scales is good to very good, and all exceed the conventional minimum of .70 (Nunnally and Bernstein 1994).

Table 1: Scale Items and Coefficient Alpha

Scale and Scale items	Coefficient α
DEPENDENT MEASURE	
Satisfaction (post recovery)	**.90**
Overall, how **satisfied** or **dissatisfied** did this experience leave you feeling?	
How well did this service experience meet your needs?[1]	
Overall, I am very satisfied with the experience.	
Overall, I am very dissatisfied with this experience.[2]	

Table 1: Scale Items and Coefficient Alpha	
Scale and Scale items	Coefficient α
MANIPULATION CHECKS	
Perceived Recovery Performance[3]	**.81**
I would rate the performance of the airline in dealing with the cancellation as exceptional.	
The airline (or it's agent) could have done a lot more for me.	
For the situation described, I would rate the efforts of the airline to deal with my problem as superior.	
Perceived Harm Caused By Failure (Net Recovery of Efforts)[3]	**.76**
Overall, considering the efforts of the airline to deal with this service failure, this encounter did not create a major problem for me.[2]	
Considering the efforts of the airline to handle the problem, this situation still caused me a great deal of inconvenience.	
Even with the efforts of the service employee to deal with the problem, this experience caused me real harm.	
1 = Utilized a 9-point strongly disagree/strongly agree Likert format; all others utilized a 7-point format 2 = Reverse coded 3 = Failure conditions only	

Manipulation checks indicated that the harm (net of recovery) manipulation was successful ($\underline{X}_{HI/MOD/LO}$ = 4.83/3.02/2.84; $F_{(2,138)} = 40.2$; $p < .0001$; $\eta^2 = .38$). The difference between the perceived harm of the high and moderate and the high and low treatment conditions is significant at $p < .0001$, while the difference between the moderate and low condition is not significant ($p = .49$). The manipulation of harm had a moderate effect on perceived recovery performance ($\underline{X}_{HI/MOD/LO}$ = 3.89/4.65/4.97; $F_{(2,145)} = 8.8$; $p = .0003$; $\eta^2 = .11$). Manipulation checks indicated that the high- and low-performance treatments differed significantly in perceived recovery performance ($\underline{X}_{HI/LO}$ = 5.25/3.76; $F_{(1,145)} = 50.0$; $p < .0001$; $\eta^2 = .26$). The manipulation of recovery performance had a moderate effect on perceived harm ($\underline{X}_{HI/LO}$ = 3.13/4.00; $F_{(1,138)} = 18.8$; $p < .0001$; $\eta^2 = .12$). A comparison of η^2's indicates that the manipulations were successful based on the guidelines proposed by Perdue and Summers (1986).

FINDINGS

The primary method of data analysis was ANOVA and MLR. The cell means for post-recovery satisfaction are given in Table 2. An inspection of the means shows that the greater the harm, the lower the post-recovery satisfaction and the greater the recovery performance, the greater

the post-recovery satisfaction. The impression is confirmed by the basic ANOVA model consisting of the treatment main effects and interaction term which showed that both the harm ($\underline{X}_{HI/MOD/LO}$ = 3.62/4.64/5.14; $F_{(2,144)} = 11.5$; $p < .0001$; $\eta^2 = .14$) and performance ($\underline{X}_{HI/LO} = 5.38/3.55$; $F_{(1,144)} = 49.9$; $p < .0001$; $\eta^2 = .26$) main effects are significant. Therefore, H_1 and H_2 are supported. Interestingly, the interaction of the main effects is not significant ($F_{(2,144)} = 1.9$; $p = .15$; $\eta^2 = .03$). This finding will be investigated further when H_4, the interaction hypothesis, is investigated.

Table 2: The Effect of Harm (Net of Recovery Efforts) and Recovery Performance on Post-Recovery Satisfaction

		Harm High	Moderate	Low	No Failure
Recovery Performance	High	4,18	5.66	6.31	
					6.94
	Low	3.06	3.63	3.97	

To evaluate H_3, or the relative effectiveness of perceived versus objective harm in explaining post recovery satisfaction, the previous model was rerun including the perceived harm variable. This ANCOVA model is very significant ($F_{(6,134)} = 39.0$; $p < .0001$). Perceived harm is significant ($F_{(1,134)} = 95.4$; $p < .0001$) while the treatment condition of objective harm is not ($F_{(2,134)} = 1.96$; $p < .1444$). Therefore, consistent with H_3, perceived harm has greater explanatory power in explaining post-recovery satisfaction than the objective harm caused by the failure.

The preceding results indicate that perceived harm, and not the objective harm caused by the failure as measured by the experimental manipulation, offers the greatest explanatory power in understanding post-recovery satisfaction. Therefore to investigate H_4, the interaction hypothesis, a regression model with post-recovery satisfaction as the dependent variable and perceived recovery performance and perceived harm as the independent variables, was run. The model is very significant ($p = .0001$; $n = 131$; $R^2 = .70$). Perceived recovery performance is a significant predictor of post-recovery satisfaction (F = 32.1; $p = .0001$) while perceived recovery harm is not (F = .2; $p = .6634$). However, the interaction is significant (F = 5.9; $p = .0166$). These results support H_4 and indicate that while recovery performance directly influences post recovery satisfaction the effect of perceived harm caused by the failure is mitigated by recovery performance.

H_5 proposes a recovery paradox effect for the condition of low harm and superior recovery. To test H_5 the control condition of no service failure was used to compare the effectiveness of the different harm and recovery performance conditions. The mean post-recovery satisfaction score for the low harm/high recovery group (6.31) is not significantly different from the mean satisfaction of the no-failure group of 6.94 ($p = .098$). The satisfaction of the no-failure group is significantly higher than all other treatment means ($p \leq .0007$). Therefore, the null hypothesis of equal treatment means cannot be rejected, and it appears that in the case of low harm and high recovery a recovery paradox

effect, consistent with H_5, is possible. However, while this finding is consistent with a recovery paradox effect, it should be remembered that failure to reject the null hypothesis of equal means is not the same as accepting the null hypothesis.

DISCUSSION

Confirming previous research, post recovery satisfaction was directly influenced by both the recovery performance and the harm caused by the service failure. In general, the greater the recovery performance, the greater the post-recovery satisfaction. In addition, the greater the harm caused by the failure, the lower the post-recovery satisfaction. It also would appear that recovery performance and harm interact to determine post-recovery satisfaction. While perceived recovery acted directly on post-recovery satisfaction, the impact of perceived harm was mitigated by perceived recovery performance.

When considering the impact of service failure harm, service providers should recognize that the same service failure impacts customers differently. In this respect, the objective harm (as measured by length of delay) is an insufficient proxy for the perceived harm experienced by the individual. However, for most service providers the objective harm (length of delay) is readily available, whereas perceived harm is more difficult to determine.

The difference between objective and subjective harm presents a challenge given the organization's desire to standardize recovery practices and the superior customer satisfaction that possibly would result if front-line service providers could respond to each customer as an individual (Smith and Bolton 1998). On one hand, standardized policies may not allow the flexibility needed to effectively address each customer's situation. Alternatively, if recovery policies are not standardized, greater dissatisfaction might arise for consumers who feel they are being treated less equitably than others and suspect the company of playing "favorites."

This study included a control condition which allows the impact of failure and recovery to be directly compared to the satisfaction that would result from error-free service. Thus, the recovery paradox could be directly evaluated and not inferred. In general, this research found that recovery performance could only partially mitigate the dissatisfaction resulting from service failure. A recovery paradox effect, where post-recovery satisfaction was statistically equal to no-failure satisfaction, was found only in the case of low harm and superior recovery. Therefore, managers should consider whether full recovery is even possible when evaluating the tradeoff between investing additional resources in increasing reliability (to minimize failure) versus offering more generous recovery.

It is striking how low the harm caused by the failure had to be (no delay) and how high the recovery performance had to be (5,000 free frequent flyer points or a coupon good for 10% off the price of a future ticket) before post-recovery satisfaction is equal to that arising from error-free

service. Based on the findings here and the twin necessities of very low harm and superior recovery it is unlikely that recovery paradoxes are a widespread or common phenomenon.

Some might argue that the passengers that experienced no delay actually came out objectively better off given the high recovery performance portrayed here. Therefore, the low harm and superior recovery portrayed here might be expected to actually produce satisfaction greater than the case of no service failure. However, based on these results, it would appear that consumers just want service providers to do what they say they will do. Reliability, or the keeping of service promises, seems more important to consumers than superior recovery following failure which might "objectively" leave them better off than if no failure occurred. Simply put, the customer just wants the service provider to do what was promised. This finding is not obvious from studies that simply study post-recovery satisfaction and note that recovery can result in relatively high satisfaction or which employ a within subjects design and track changing satisfaction levels. This research demonstrates the significant damage to satisfaction caused by failure and the difficulty of mitigating this dissatisfaction. While superior recovery is definitely preferable to inferior recovery, in general, error free service will probably prove to be generally preferable to any realistic combination of service failure and recovery.

The finding that a recovery paradox effect may be possible when the recovery effort can completely mitigate the harm caused by failure may explain why some research has indicated that a recovery paradox is possible while others have not. Due to a lack of studies investigating harm (or severity) Matos, Henrique, and Rossi (2007) were unable to introduce this moderating variable into their meta-analysis of the recovery paradox.

It should be remembered that even in the case of a low-harm failure recovery paradox effects are limited by the requirement that customers must seek redress for recovery to occur. In the case of airline delays and cancellations most consumers seek redress or correction of the problem. However, in many service failures customers choose not to complain. In fact, under low-harm failure conditions the customer has less motivation to complain, and redress seeking may occur less often than under high-harm failure conditions (Richins 1983, 1987).

It is also possible that the recovery paradox effect found here would disappear following repeated service failures even with identical, superior recovery efforts (Maxham, and Netemeyer 2002). A pattern of failure would lead customers to lower their assessment of the provider's service reliability, the most important element of service quality (Zeithaml, Parasuraman, and Berry 1990). This lowered assessment would likely counteract any recovery paradox effect. Service failure appears to magnify pre-existing concerns about a company's service quality. Recovery might have to be progressively higher with each succeeding service failure to counteract the impact of failure expectations. Clearly, the issue of the harm caused by the failure is worthy of future study.

CONCLUSION

The study demonstrated the importance of harm as well as recovery performance in determining post-recovery satisfaction and answers the call of Matos, Henrique, and Rossi (2007) for more studies investigating the severity of the failure. Echoing the findings of Michel and Meuter (2008) it would appear that while the recovery paradox might be possible it is likely a very rare event. This research offered a explanation for the rarity of the recovery paradox and the inconsistent findings in the literature (high recovery performance given low service failure harm). Therefore, researchers and managers evaluating service failure and recovery should give careful consideration to whether the full recovery is actually possible given the harm caused by the failure when considering the trade-off involved in allocating additional resources in assuring superior service reliability versus accepting lower levels of readability while focusing on superior recovery in the event of service failure.

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PROMOTIONS AS COOPETITION IN THE SOFT DRINK INDUSTRY

William K. Meade II, Basic IP Management
Michael R. Hyman, New Mexico State University
Larry Blank, New Mexico State University

ABSTRACT

Competing firms with partial conflicts of interest often seem to act irrationally. Nonetheless, an analysis of promotions by soft drink bottlers in one geographic market suggests that firms' behaviors in such circumstances may be rational. To show that coopetition can exist among producers of consumer non-durables, soft drink scanner data is used to examine (1) rotation patterns of promotions among competitors, and (2) competitive draw. The result–soft drink bottlers promote strong brands for a mixture of cooperative and competitive reasons–supports the brand interdependence framework, which uses asymmetric competitive draw to explain promotions as coopetition. The strategy of strong bottlers to run predominantly asynchronous promotions emerges as an effective way for them to compete with weak bottlers.

INTRODUCTION

Interdependence with complete conflicts of interest epitomizes competition (Moorthy 1985); interdependence with partial conflicts of interest warps competition. Partial conflicts of interest can create cooperative incentives among rivals and thus foster implicit coalitions (Fader and Hauser 1988), which may obstruct competition and produce asymmetric, nested, and tangled hierarchies of interdependence. For example, implicit coalitions in oligopolies allow covert cooperation to become nested within overt competition (Fader and Hauser 1988). In other words, the subtle intertwining of cooperation and competition, a.k.a. coopetition, reflects a kinship between seeming opposites (Brandenburger and Nalebuff 1996; Hamel, Doz, and Prahald 1989; Telser 1985).

Marketing scholars have applied the mathematical (Kinberg, Rao, and Shakun 1974; Lal 1990a, b; Narasimhan 1988; Raju, Srinivasan, and Lal 1990; Rao 1991) and tournament (Fader and Hauser 1988; Griffith and Rust 1997) literatures in game theory to their studies of promotion behavior. Their *brand interdependence* publications are so called because brand preferences are viewed as an external mechanism that imposes interdependence. Often regarded as "tangled beyond hope of analysis" (Baumol, quoted in Dolan 1981), interdependence is often ignored or assumed away by economists. Nonetheless, the complexities of real markets overwhelm simplifying

assumptions about rational actors and expected utility (Dolan 1981). Game theory captures these complexities and uses them to explain price promotion.

The *brand interdependence* approach recognizes that the market disorder (relative to perfect competition) caused by brand preferences divides competitors into *insiders/strong rivals* and *outsiders/weak rivals*; alternatively, per the economics literature, *dominant competitors* and *fringe competitors*. Analogous to the use of perfect competition in normative pricing models, market disorder in brand interdependence models is used to explain the promotion behaviors of strong rivals. In such disordered cases, profits extracted by insiders from an implicit coalition can be as high as those achieved by explicit collusion (Lal 1990a).

To show that coopetition can exist among producers of consumer non-durables, we use soft drink scanner data to examine (1) rotation patterns of promotions among competitors, and (2) competitive draw. Our exposition proceeds as follows. First, we provide overviews of the game theory and brand interdependence literatures, as well as the soft drink industry and its promotions. Second, we compare promotion patterns and frequency to promotion forecasts. Third, we analyze relative market share and competitive draw. Finally, to show that coopetition exists in this market, we answer the following three questions: (1) Do strong bottlers alternate or rotate their promotions? (2) Is there competitive parity among strong bottlers and an asymmetry between strong and weak bottlers? (3) Do strong bottlers benefit from asymmetric competitive draw? Although single-source data has been used to study the third question, we augment this data type with institutional information, i.e., we study cross-promotion effects that include all merchandising rather than simply price, advertising, or display.

GAME THEORY AND BRAND INTERDEPENDENCE LITERATURES

The central question in promotion research is why companies price promote rather than change prices permanently (Blattberg and Neslin 1990; Lal 1990b). Standard ad hoc answers, such as stimulating trial, rewarding loyal users, weakening loyalty to competitors, and the like, are insufficient because they are temporally myopic and ignore general equilibrium constraints (Holland, Holyoak, Nisbett, and Thagard 1986).

Perhaps the most common competition-based explanation for promotions is the one-shot, or finite-horizon, prisoner's dilemma (Blattberg and Neslin 1990). The essence of the prisoner's dilemma is the contradiction between players' individual and joint interests (Fader and Hauser 1988). For example, if all retailers in a market promote, then total profits are reduced (Walters 1991). If no retailers promote, then all retailers are better off. However, fear of defectors encourages each retailer to promote.[1]

Promotions as Economic Games

Promotions research has benefited from mathematical and tournament-based works in game theory. During the 1970s, mathematical game theory became a popular language for articulating complex economic problems (Poundstone 1992). During the 1980s, the relevance of game theory to marketing grew as knowledge of the prisoner's dilemma spread and most manufacturers and retailers came to believe that they participate in promotional prisoner's dilemmas (Blattberg and Neslin 1990). Experiments conducted during this time examined the emergence of cooperation among competitors, i.e., cooperation in non-cooperative games (Axelrod 1984). Cooperative games are games where agreements, promises, and threats are fully binding and enforceable. Games without enforcement are call non-cooperative (Aumann 1989).

As laboratories for studying decision-rule efficacy, prisoner's dilemma tournaments explored two-player games and how coalitions influenced strategy development in three-player games (Fader and Hauser 1988). These tournaments showed that winning strategies avoid actions that realize complete conflicts of interest, even among unequal rivals. For example, two strong players in a pricing game may alternate low and high prices, even if a third weak player constantly charges low prices, because the mutual motivation of strong players is to maximize their joint payoff against defecting players (Fader and Hauser 1988). Strong players gain by not over-reacting to weak players, so their incentives are somewhat compatible. This result does not mean that iterated prisoner's dilemmas automatically produce cooperative outcomes; rather, it means *studying the joint incentives and relative strengths of players in non-finite games should prove insightful to marketers*.

The Brand Interdependence Literature

Brand interdependence studies often uses game theory for evidence that covert cooperation can induce promotions. This literature assumes that product positions give strong rivals joint incentives. For example, in a multi-brand market with two premium brands that benefit from a price/quality asymmetry in market response, customers willingly switch to a premium brand–but not a private brand–on promotion, so premium brands can be promoted without fear of retaliation by private brands. The joint incentives of premium brand firms lead to staggered (i.e., non-concurrent or asynchronous) promotions; the time on promotion for a premium brand is proportional to (1) the relative market share of each brand, (2) the competitive draw from private brands while they are on promotion, and (3) the competitive draw from other premium brands while they are on promotion (Kinberg, Rao, and Shakun 1974). Because short-term promotions allow sellers to increase profits by combining a profit-through-margin strategy during off-promotion weeks with a profit-through-volume strategy during on-promotion weeks (Narasimhan 1988), the sufficient condition for alternating promotions among premium brands is *the revenue gain from sales to weak brand*

customers must exceed the revenue loss from regular customers who pay less (Kinberg, Rao, and Shakun 1974).

The *brand interdependence* literature has progressively strengthened the covert cooperation explanation of promotions by exploring five mechanisms that may account for the correlation between market position and promotion behavior: price-quality relationships (Blattberg and Wisniewski 1989), single-period, three-player pricing games (Narasimhan 1988), finite-period multi-player pricing games (Raju, Srinivasan, and Lal 1990), infinite-period three-player defensive pricing games (Lal 1990a), and infinite-period multi-player pricing through channels (Lal 1990b). This work has uncovered asymmetries in inter-store effects (Kumar and Leone 1988), inter-category effects (Mulhern and Leone 1991), and intra-category effects (Blattberg and Wisniewski 1989; Walters 1991). In addition, competitive reaction elasticity to a promotion is higher when cross-brand elasticity is larger, and reaction elasticity tends to be lower when own-brand elasticity is higher (Leeflang and Wittink (2001).

Using data on a diverse set of consumer products, a recent study by Steenkamp, et al. (2005) models competitive reactions to promotions while controlling for key product/market characteristics (see also Hanssens, Parsons, and Schultz 2001). By focusing on retailer-contracted promotions that encourage asynchronous promotions by dominant brands, the soft-drink study described here differs from Steenkamp et al. (2005); specifically, the interplay between strong brands and weak brands may be explored.

Asymmetrical competitive draw, which benefits insiders/*strong brands* and penalizes outsiders/*weak brands*, is central to the *brand interdependence* explanation of promotions. Also called a *price-quality tier effect*, it has substantial empirical support (Blattberg and Wisniewski 1989; Carpenter, Cooper, Hanssens, and Midgley 1988; Cooper 1988; Fader and Lodish 1990; Hanssens, Parsons, and Schultz 2001; Lemon and Nowlis 2002; Lilien, Kotler, and Moorthy 1992). This assumption, seemingly innocuous at first, has proven powerful because it makes complex markets manageable without ignoring competitive dynamics.

Strong brands compete on two fronts: with other strong brands through price and non-price competition, and with weak brands in a *competitive fringe*. Under the classic Dominant Firm/Competitive Fringe Model (DFCF) in economics, fringe supply is a function of the price set by the dominant firm (Carlton and Perloff 2005). That is, weak-brand fringe suppliers act as price takers similar to perfectly competitive firms. Unlike perfect competition, however, price levels are set by the dominant firm, not by market supply and demand equilibrium. By reducing fringe-producer supply, the lower prices charged by a dominant firm stimulate *residual demand* for its products, but at lower per unit revenue. A dominant firm's profits should increase if it adopts a strategy that limits fringe supply while allowing higher prices on its premium brands. An example of this strategy is the introduction of non-premium versions of consumer products in established product categories, such as Anheuser-Busch's introduction of *Natural Light* beer.

Unlike the DFCF Model, many consumer markets are comprised of a few dominant brands (rather than one) and a competitive fringe of weak brands. If an industry's dominant firms cooperate on a long-term strategy to reduce fringe supply, then the residual demand for these firms' strong brands will increase. Price promotion is one strategic way for strong brands to compete with fringe brands. If each strong brand takes its turn in offering a price promotion, then the competitive fringe's sales will be limited and dominant firms' profitability will be enhanced. For this strategy to work, however, the sales gained by a strong brand during its promotion period should exceed the sales lost when other strong brands take their promotional turn (i.e., the sales gained during promotion periods come from strong and weak competitors). If strong brand promotions cover most time periods—as was the case for the soft drink market evaluated here—the fringe supply is effectively limited. That is, a cooperative strategy by competing strong brands leads to effective competition against weak brands.

This strategy for controlling fringe supply also enables firms with strong brands to price discriminate between different types of customers (e.g., brand-loyal customers versus price shoppers; customers who plan purchases to coincide with lower prices versus customers who purchase as the need arises.) The soft drink industry provides a perfect venue for assessing the impact of price discrimination as a percent of strong brand sales during promotion periods versus non-promotion pricing periods.

THE SOFT DRINK INDUSTRY

By allowing exclusive territories for bottlers, section one of the Soft Drink Interbrand Competition Act of 1980 (SDICA) eliminates intra-brand competition when inter-brand competition is "substantial and effective." Section two of the SDICA "virtually relieves bottlers of any liability for treble damages" from the Clayton Act by making territorial provisions legal until courts declare them illegal (U.S. Congress 1979). This arrangement is contrary to most other industries, which rely on both inter- and intra-brand competition. Ironically, a decade of intense consolidation and "rampant price fixing" (Galvin 1990, p.27) followed enactment of the SDICA. The *brand interdependence* approach implies that, in granting this exemption, the U.S. Congress confused genuine conflict of interest with ersatz rivalry of an implicit coalition.

Market Feedback Mechanisms

The most important feedback mechanism among bottlers is the process of bidding for promotions in large grocery chains. Each quarter, bottlers receive requests for proposals (RFPs) that indicate the weeks and promotion types on which a chain would like bids. Bottlers return the RFPs and may be informed of the weeks and promotion types won or may receive a request to submit an improved bid. Given the few strong brands, each bottler can guess the other bottlers' bids from a

grocery chain's response to its bid. Analogous to airline reservation systems providing feedback for rival pricing analysts to signal one another, a large grocery chain can interconnect product rivals, make them aware of their interdependence, force their offerings into alignment, and help them anticipate competitors' near-term actions.

A second feedback mechanism is the Robinson-Patman Act, which mandates that attractive promotion alternatives developed for the largest grocery chain(s) must be made available to all other chains in a bottler's territory. In effect, the Robinson-Patman Act locks all retailers in a market to a promotional menu developed for the largest chain(s).

Single-source data provides a third feedback mechanism. IRI's InfoScan® and A.C. Nielsen's SCANTRACK® provide measures of competitors' sales, average price, sales on promotion, and market penetration by UPC. (Note: All the strong bottlers in the test area subscribed to at least one of these sources.)

Direct store delivery provides a fourth feedback mechanism. Thanks to the SDICA, bottlers of national brands deliver their products to each grocery store; as a result, they directly observe competitors' promotions, retailer compliance with promotion terms and conditions, and consumer sales.

Promotions

A calendar marketing agreement (CMA) is a contract between retailers and suppliers for display/advertising/pricing bundles (Felgner 1988; Galvin 1990). CMAs do not define promotions in terms of absolute prices, display locations, or ad requirements (see Figure 1). Classifying a promotion as feature or secondary depends on other concurrent promotions; one week's feature may be another week's secondary. Such relativism may provide competitive freedom for rival grocery chains while allowing inter-bottler competition. Soft drinks, the best-selling grocery category, account for annual sales of $9 billion, which is 4% of all grocery sales and seven times the direct-product profitability of most dry grocery goods (Felgner 1988). The sales and profitability of soft drinks provide grocery chains with significant incentives to promote, apart from bottlers' interests.

FIGURE 1
CONDENSED TERMS OF CALENDAR MARKETING AGREEMENTS FOR STRONG BOTTLERS

Bottler	Calendar Marketing Agreement Terms and Conditions
RC/7Up	Customer must display products separate and apart from the normal beverage department and reduce retail price to consumer to reflect promotional allowance. Customer must feature advertise all available . . . products in the highest form of account's normal means of advertising. Any form other than newspaper must be approved . . ., Customer must also reduce retail price to reflect promotional allowance.

FIGURE 1
CONDENSED TERMS OF CALENDAR MARKETING AGREEMENTS FOR STRONG BOTTLERS

Bottler	Calendar Marketing Agreement Terms and Conditions
Pepsi-Cola	Match last year's feature ad week frequency (minimum 26 dual package features). Pepsi-Cola brands must be featured on four of . . . six holiday weeks; Easter, Memorial Day, Independence Day, Labor Day, Thanksgiving, Christmas. Feature pricing should include all brands available in that package. No products distributed by the Coca-Cola Bottling Company of [State X] are to be featured on Pepsi Ad weeks. Current position, space, and share of all gondola, merchandising and cold bottle equipment allotted to the [State X] Pepsi-Cola Company in last year will not diminish this year. All featured packages must be supported with a display separated from the beverage department.
Coca-Cola	Feature Coca-Cola products in 18 class "A" ads per the attached schedule. Feature Coca-Cola products in 10 in-store flyers with in-store displays. Maintain current beverage department space and location . . . cooler placement, . . . bin display. Maintain either 12 pack can display or 2 liter display on non sale weeks in key selling area to increase volume at higher margins. All ads to be class "A," best food day, feature to run seven days using highest form of advertising. All ad weeks to be exclusive of Pepsi-Cola products. Display products separate from normal beverage department supported by point-of-sale and priced to reflect savings to consumer. This program does not restrict the pricing or displaying of competitive products in any way. Nothing herein requires any particular retail price from Coca-Cola products. Retailer may terminate at will. We reserve the right to cancel this program upon seven (7) days written notice.

Simultaneous bottler-to-bottler and retailer-to-retailer competition is an example of the *Russian doll* effect. Rivalry among bottlers is analogous to a small Russian doll (from a chain's perspective) nested inside a larger doll; that is, soft drink merchandising variables are weapons in two distinct, yet superimposed, competitive games. By specifying promotion merchandising conditions on a relative basis, bottlers can dictate some terms of their mutual rivalry without infringing on rivalry between or among chains.

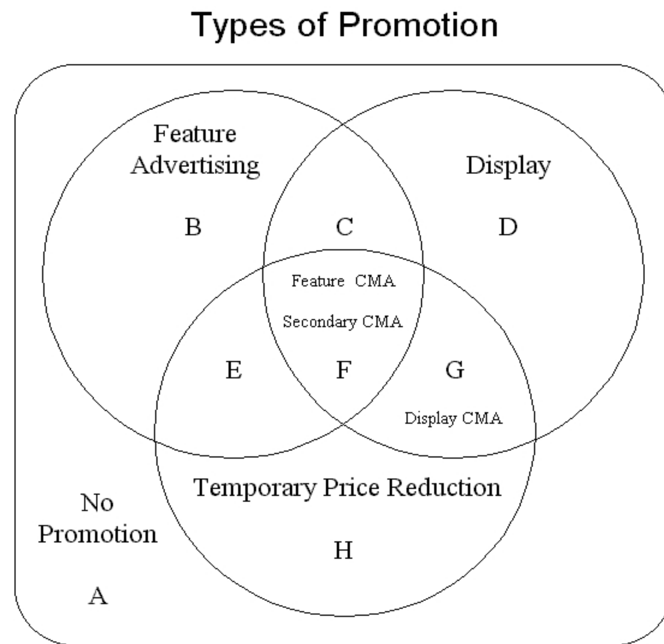
CMAs bundle merchandising conditions; by accepting a bottler's promotion, a retailer commits to an ad, a display, a price, and a 20¢ bill-back allowance for every case sold. Bundled merchandising conditions may explain how bottlers cooperate while competing. Because bundling constrains competitive tactics, the bundle determines if the rivalry between bottlers is a positive, neutral, or negative sum game. For example, CMAs for Coke and Pepsi bottlers specify that the other's products cannot be advertised concurrently. Although seemingly competitive, if these bottlers cannot advertise simultaneously, then they cannot price-compete simultaneously. Thus, what seems like competition can be cooperation and, as suggested above, a possible tacit strategy by strong bottlers to cooperate in limiting the size of weak bottlers.

Interviews with promotion managers, CMAs of national brand bottlers, and other source documents, indicated that promotions differed by frequency and intensity (e.g., discount depth and

duration, prominence of display and advertising, permission for simultaneous competitive promotions). Bottlers chose promotions from a menu of four types (i.e., no promotion, prominent display, secondary promotion, and feature promotion) and four package forms (i.e., 16-ounce 8-packs, 2-liter bottles, 12-ounce-can 6-packs, and 12-ounce-can 12-packs).

In addition to these four types of promotion, other types occur because compliance with promotional agreements is imperfect, fewer interacting merchandising variables are used to promote weak and store brands than strong brands, and merchandising is layered (i.e., in addition to negotiated promotion events arranged to run across all stores in a chain, each store has the prerogative to display and to some extent price soft drinks). Figure 2 shows a practical framework for reconciling bottlers' intended offerings with offerings realized at retail (Duffy 1991). Areas A, F, and G fit the promotions profiles found in CMAs.

FIGURE 2
CALENDAR MARKETING AGREEMENT PROMOTION TYPES



Promotion Archetypes		
Promotion Name	**Region (Letter)**	**Ideal Components**
No Promotion	A	No merchandising support. Display from shelf facing only.
Display Promotion	G	End aisle display and temporary price (TPR) reduction combined.
Secondary Promotion	F	Line advertisement, end aisle or power alley display, and small TPR combined. A small TPR is a smaller price reduction than that for products on feature promotion in the same week.
Feature Promotion	F	Illustrated advertisement, power alley display away from the soft drink category, and the deepest TPR for any product promoted in a given week

EMPIRICAL STUDY

Data

A. C. Nielsen provided one year of store-level, single-source data for 37 stores in a Midwestern U.S. city. The data included weekly prices, sales quantity, store flier advertising, and in-store displays for carbonated beverages. A *helpful local bottler* provided CMAs for all bottlers that used them and source documents from the city's largest grocery chain. Thus, each UPC could be assigned to the appropriate bottler,[2] which allowed data aggregation to the effective-competitor level.

Extracting CMA Promotions

To test for alternating CMA promotions, store-week data were classified in accord with Figure 2. Specifically, UPC-store-week records were extracted from a database representing any ad or any display, which yielded more than 30,000 records. Promotion types from Figure 2 were manually coded in accord with CMA terms and conditions and insights from the *helpful local bottler*. The coding heuristics focused on five sample stores in the largest chain because: (1) the chain's buying power drives CMA evolution in this Midwestern U.S. city, (2) audits of several stores in this chain validated the *helpful local bottler's* description of CMAs, and (3) the *helpful local bottler's* promotion records validated the algorithms for these stores.

Once rules for categorizing promotions were developed, they were encoded into a REXX program and run on the UPC-store-week records to extract bottler promotions for every store-week. A single algorithm worked for three possible reasons: (1) the Robinson-Patman Act forces bottlers to offer all retailers the same promotional menu, (2) the bottlers' delivery people set up and maintain the promotions in every store location, and (3) CMAs are blatant. Consistent with previous research

conventions, discounts were operationalized as a ratio of each week's price for a UPC to the highest price for that UPC during the year (Narasimhan 1988; Raju, Srinivasan, and Lal 1990).

What Makes a Strong Bottler Strong?

Classifying strong and weak bottlers is a critical operational issue. Coke, Pepsi, and RC/7Up bottlers were assigned to the strong category,[3] and Canada Dry, Canfield, Faygo, Store, and Unknown brand bottlers to the weak category. The justification for these assignments is fourfold.

1. Coke and Pepsi were considered strong brands in the CMA literature (Lal 1990b; Paztor and Reibstein 1987).
2. Coke, Pepsi, and RC/7Up bottlers compete in all grocery chains, but weak brands are carried sporadically. Thus, strong brands have much greater exposure to one another than to weak brands. This exposure constancy may explain the emergence of implicit coalitions (Nagle 1987).
3. The three bottlers assigned to the strong category were the only bottlers using CMAs during the period under consideration.
4. The critical *brand interdependence* issue is whether or not insiders recognize joint incentives to restrain prices in the face of outsiders' unrestrained pricing (Fader and Hauser 1988). For soft drinks, strong brands are in the top price tier. If this product is consistent with other grocery products (Blattberg and Wisniewski 1989), then strong soft drink brands should benefit from asymmetric competitive draw between top and lower price tiers and suffer from myopic promotions by other strong brands.

THREE RESEARCH QUESTIONS

Question #1: Do Strong Bottlers Alternate or Rotate Their Promotions?

For oligopolies, the *brand interdependence* literature predicts alternating promotions by strong rivals will crowd out promotions by weak rivals (Kinberg, Rao, and Shakun 1974; Lal 1990b). If true, then strong bottler promotions (1) will be negatively associated, and (2) will run during most promotion weeks. Table 1 displays the association of strong bottler promotions.

TABLE 1: CONTINGENCY TABLES FOR STRONG BOTTLER CMA PROMOTIONS			
Table of COKE (rows) by PEPSI (columns) for RC/7UP = Low			
	Low	**High**	**Total**
Low	263 21.21%	441 35,56%	704 56.77%
High	520 41.94%	16 1.29%	536 43.23%
Total	783 63.15	457 36.85	1240 100.00%
Table of COKE (rows) by PEPSI (columns) for RC/7UP = High			
	Low	**High**	**Total**
Low	149 39.73%	97 25.87%	246 65.6%
High	114 30.40	15 4.00%	129 34.40%
Total	263 70.13%	112 29.87	375 100.00%

Feature and secondary promotions were aggregated into a high-promotion-intensity category. This aggregation heuristic is conservative because removing the distinction between feature and secondary promotions makes it more likely that strong bottlers promote simultaneously. In fact, strong bottlers did not alternate their promotions in a simple pattern; instead, retailers controlled promotions and rotated among a product set, a temporary price reduction set, an ad set, and a display set. Presumably, retailers used this complex rotation pattern to avoid promotion wear out.

A strong negative correlation between strong brand promotions implies *brand interdependence*, which Lal (1990b) tested via a χ^2 test for independence between trade promotions for two brands of dishwashing liquid. Because the soft drink market studied here has three strong rivals, a loglinear model provides the closest test. Although loglinear models may complicate interdependence assessment (e.g., by reversing conventional interpretations of p and χ^2 statistics), they compensate by allowing tests of independence to be matched to sub-coalitions as well as to all rivals taken as a group.

Consequently, to determine if strong bottler promotions are negatively associated, five hierarchical loglinear models that express three competitive scenarios were tested: (1) three-way-independence strong bottlers (row 1 of Table 2), (2) dominance by each strong bottler (rows 2, 3, and 4), and (3) RC/7Up bottler follows a Pepsi/Coke bottler coalition (row 5). Model 1, a simple test of the independence of strong bottler promotions, is the logical analogue in three dimensions to the two-dimensional χ^2 test in Lal (1990b). Model 2 tests if the RC/7Up and Pepsi bottlers follow the Coke

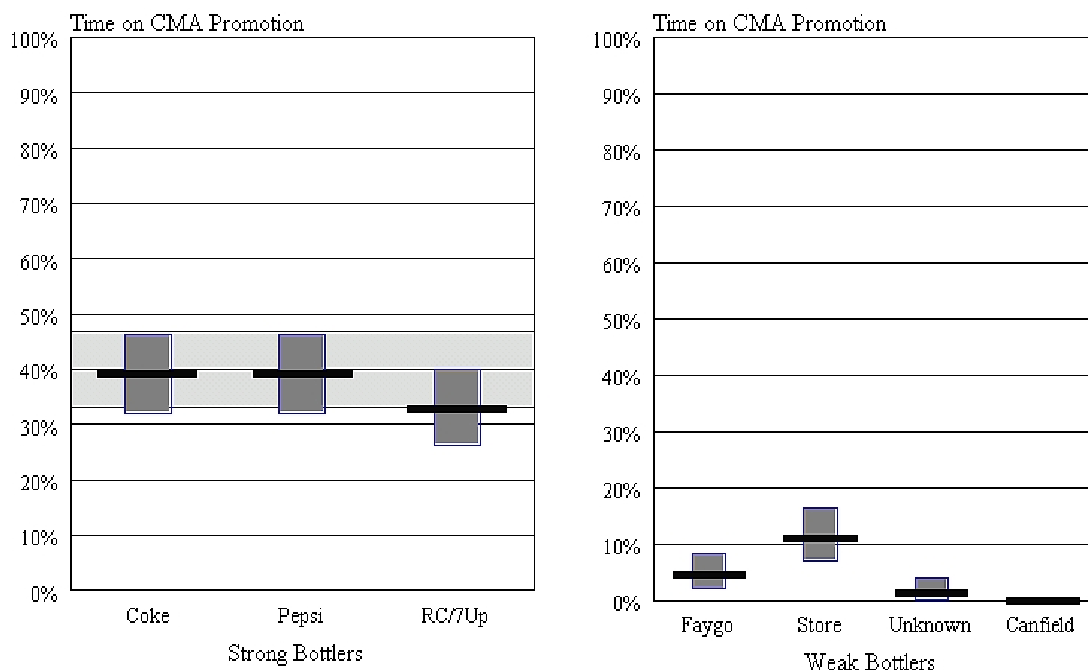
bottler, Model 3 tests if the RC/7Up and Coke bottlers follow the Pepsi bottler, Model 4 tests if the Pepsi and Coke bottlers follow the RC/7Up bottler, and Model 5 tests if the RC/7Up bottler is an outsider to a Coke and Pepsi bottler coalition. Model 1 provides the worst fit, which suggests that promotions by Coke, Pepsi, and RC/7Up bottlers are statistically dependent and allocated systematically. Although Models 2, 3, and 5 fit better than Model 1, none are statistically significant, which suggests a strong three-way interaction. The lack of statistical independence, coupled with the negative associations in Table 1, indicate that bottler promotions are negatively associated (Lal 1990b).

TABLE 2: HIERARCHICAL LOGLINEAR MODELS

	Model	d.f.	Pearson Chi-square	p value	Likelihood Ratio Chi Square	P value
1	RC/7Up, Coke, Pepsi	4	517.82	.000	608.22	.000
2	RC/7Up*Coke, Coke*Pepsi	3	57.47	.000	53.80	.000
3	RC/7Up*Pepsi, Coke*Pepsi	2	60.96	.000	56.92	.000
4	RC/7Up*Pepsi, RC/7Up*Coke	2	496.61	.000	592.55	.000
5	RC/7Up, RC/7Up*Coke	2	67.63	.000	63.19	.000

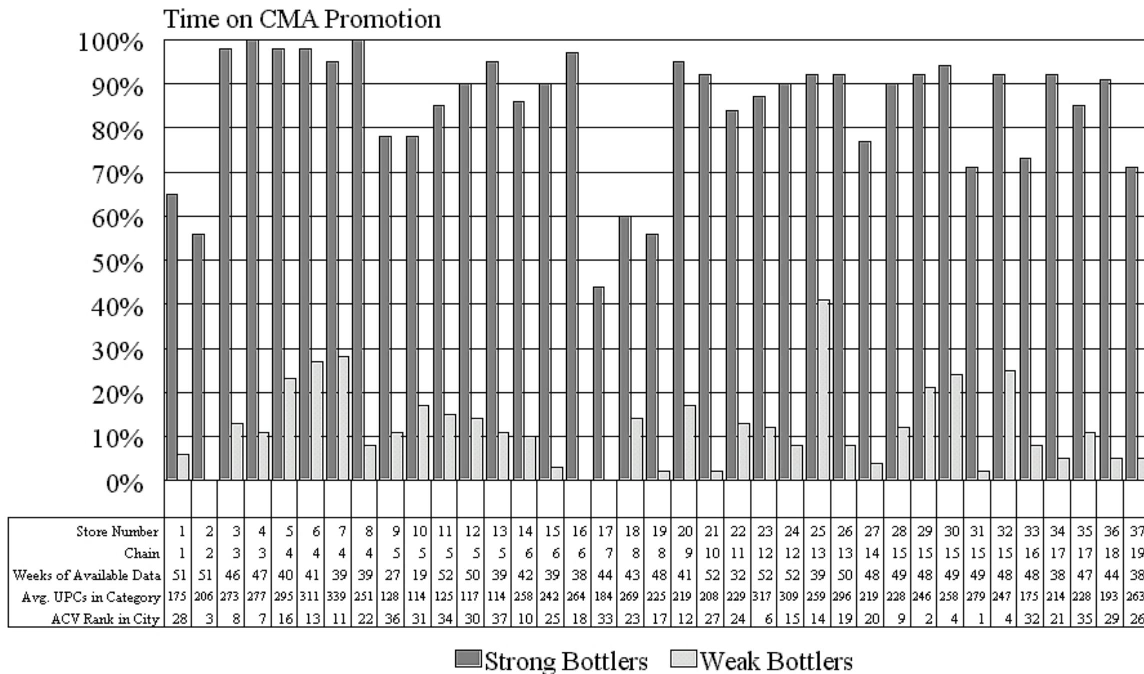
The negative association among strong bottler promotions cannot alone explain weak bottler's lack of opportunity to promote; in addition, it must be shown that strong bottlers consume most promotion opportunities. If previous results can be extended to three bottlers, then the time each strong bottler spends on CMA promotion is between 33% and 47% of the year and varies ±14% from one another (Kinberg, Rao, and Shakun 1974). Figure 3–a high-low-close chart in which the upper and lower limits depict the 95% confidence interval–shows that actual times and confidence intervals around these times fall directly into the posited interval (shaded region) for all three strong bottlers. Strong brands (in the left panel) absorb the majority of promotions, and the proportion of time strong bottlers are on CMA promotions varies much less (6.17%) than 14%. As has been observed previously, Coke and Pepsi bottlers were on CMA promotion roughly the same proportion of time (Krishna, Currim, and Shoemaker 1991; Lal 1990b). In contrast, the RC/7Up bottler's promotion frequency falls outside the posited interval (although the confidence interval overlaps the predicted range). The promotion frequency of store brands supports the contention in Kruger and Struse (1987) that stores use house brands to force national brands to promote.

FIGURE 3
ACTUAL VERSUS PREDICTED TIME ON CMA PROMOTION BY BOTTLER



The crowding out of weak bottlers by strong bottlers also can be verified by contrasting time spent on CMA promotion within stores. As predicted by the *brand interdependence* approach, strong bottlers out-promote weak bottlers; specifically, strong bottlers are on CMA promotion an average of 84% (median 90%) of the time, compared with 12% (median 11%) for weak bottlers. This is consistent with a proposition by Steenkamp et al. (2005) "that private labels react less to competitive attacks than national brands do. If the attacker is a national brand, then that brand as well as the retailer selling it may benefit from the additional sales generated from the increased marketing effort" (p.38). Chain memberships, weeks of data, average number of UPCs in the category, and ACV rank in the market, are unrelated to promotion frequency (see Figure 4).

FIGURE 4
ACTUAL VERSUS PREDICTED TIME ON CMA PROMOTION BY BOTTLER



Store Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Chain	1	2	3	3	4	4	4	4	5	5	5	5	5	6	6	6	7	8
Weeks of Available Data	51	51	46	47	40	41	39	39	27	19	52	50	39	42	39	38	44	43
Avg. UPCs in Category	175	206	273	277	295	311	339	251	128	114	125	117	114	258	242	264	184	269
ACV Rank in City	28	3	8	7	16	13	11	22	36	31	34	30	37	10	25	18	33	23

Store Number	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37
Chain	8	9	10	11	12	12	13	13	14	15	15	15	15	15	16	17	17	18	19
Weeks of Available Data	48	41	52	32	52	52	39	50	48	49	48	49	49	48	48	38	47	44	38
Avg. UPCs in Category	225	219	208	229	317	309	259	296	219	228	246	258	279	247	175	214	228	193	263
ACV Rank in City	17	12	27	24	6	15	14	19	20	9	2	4	1	4	32	21	35	29	26

Thus, the answer to Question #1 is "yes"; bottlers of premium national soft drink brands alternate promotions. Strong bottlers absorb 87.8% of available CMA promotion time and have promotion schedules that are so negatively associated that they virtually never conflict. The alternating promotion schedules and high percentage of CMA promotion time suggests that the strong brands collectively engage in a long-term strategy to compete with weak brands.

Question #2: Is There Competitive Parity Among Strong Bottlers and an Asymmetry Between Strong and Weak Bottlers?

Existing *brand interdependence* models predict competitive parity among strong bottlers and competitive asymmetry between strong and weak bottlers. In the present study, we assess strong bottler competitive parity in terms of sales and market share.

Relative Sales among Strong Bottlers.

"The smaller the difference in market share among the premium [strong] brands, the greater the chances of alternating promotions" (Kinberg, Rao, and Shakun 1974, p.955). This statement,

taken with Figures 3 and 4, suggests that market shares of strong brands will be roughly equal, with Coke having the highest share (because it is the strongest brand), Pepsi the second highest, and RC/7Up the lowest. To test this notion, we aggregated dollar and unit sales for all bottlers within each store. Table 3 shows each bottler's annual median, average, and total sales in ounces and dollars.

TABLE 3: CENTRAL TENDENCY OF BOTTLER SALES PER STORE				
In Ounces				
Bottler	**Median Sales**	**Average Sales**	**Total Sales**	**Market Share**
Coke	6,633,830	9,578,158	354,391,862	27.47%
Pepsi	7,918,053	8,978,917	332,219,939	25.75%
RC/7Up	3,428,640	4,722,137	174,719,070	13.54%
Faygo	1,635,253	2,212,827	81,874,584	6.35%
Store	1,931,781	10,542,030	326,802,936	25.33%
Other	387,401	545,630	20,188,295	1.56%
In Dollars				
Coke	116,784.25	161,160.99	5,962,956.68	33.07%
Pepsi	142,412.35	149,595.72	5,535,041.47	30.70%
RC/7Up	62,425.31	85,645.52	3,168,884.38	17.58%
Faygo	18,614.36	23,505.95	869,720.30	4.82%
Store	12,311.29	61,400.78	1,903,424.09	10.56%
Other	12,455.09	15,908.43	588,612.05	3.26%

Table 3 shows (1) equal market shares for store brands and strong bottlers, and (2) reversed median and average sales for Coke and Pepsi bottlers, which suggests that Pepsi is stronger in smaller stores and Coke is stronger in larger stores (i.e., the greater the share of large store promotions, the more skewed average sales relative to median sales.) Among strong bottlers, market shares vary from the Coke bottler as largest to the RC/7Up bottler as smallest. Coke and Pepsi bottler ounce sales do not differ significantly (T=0.918, DF=36, P=0.365), whereas Coke and RC/7Up bottler ounce sales (T=6.499, DF=36, P=0.000) and Pepsi and RC/7Up bottler ounce sales (T=6.871, DF=36, P=0.000) differ significantly.

Except for a decrease in the store brand's strength, revenue results echo ounce results. Coke bottler sales are similar to Pepsi bottler sales (T=1.202, DF=36, P=0.237) and RC/7Up bottler sales (T=7.856, DF=36, P=0.000), and Pepsi bottler sales are similar to RC/7Up bottler sales (T=8.203, DF=36, P=0.000). Figures 5 and 6 depict these results in terms of Tukey box plots with 95 percent confidence intervals (McGill, Tukey, and Larsen 1978). (Note: The indentations in the boxes are

confidence intervals around medians.) Given the inherent noisiness of cross-promotion and cross-chain data (Abraham and Lodish 1993), the resistance of medians to bias is fortuitous and the confidence intervals confirm t-tests for similar sales among bottlers. Figure 5 shows average store sales in ounces are slightly higher for the Pepsi bottler than the Coke bottler–although their market shares do not differ significantly–with the RC/7Up bottler's sales lagging meaningfully. In contrast, Figure 6 shows average store sales in dollars for all three bottlers are roughly similar. Because the RC/7Up bottler charges a higher average price than the Coke or Pepsi bottlers--1.3¢ per ounce versus 0.9¢ per ounce–its market share in dollars is substantially higher than its market share in ounces.

FIGURE 5
ANNUAL BOTTLER SALES IN OUNCES

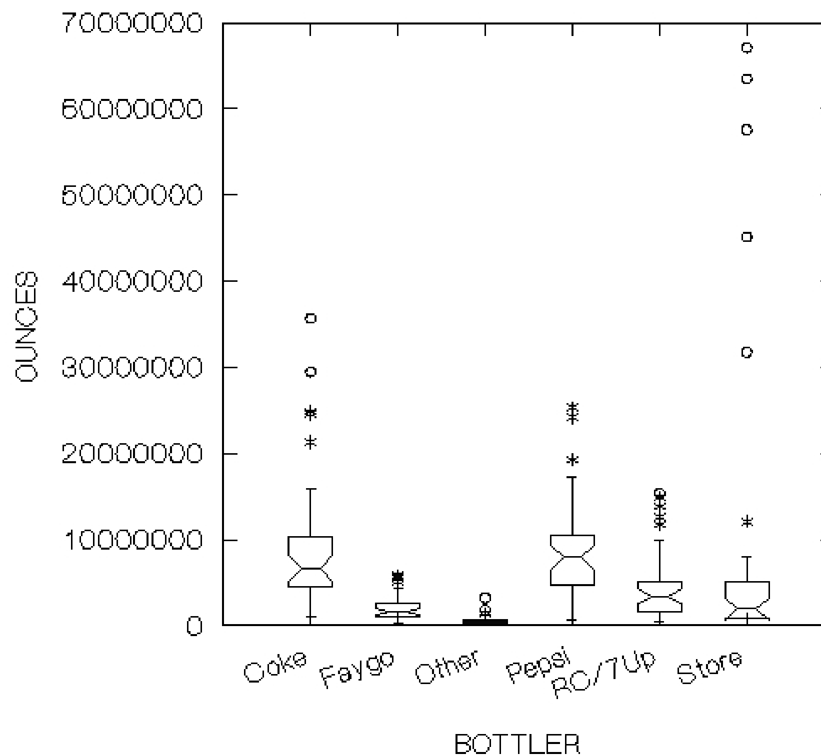
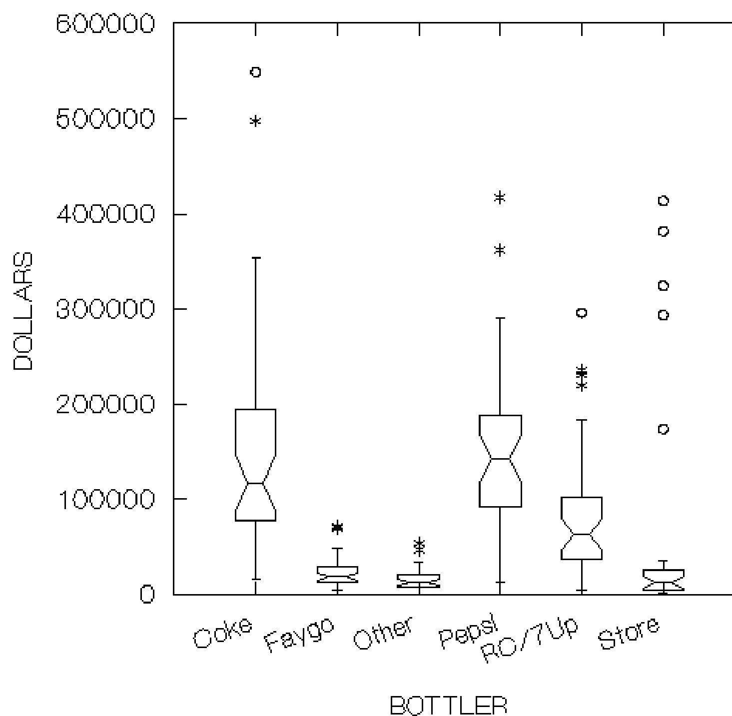


FIGURE 6
ANNUAL BOTTLER SALES IN DOLLARS



The finding that the RC/7Up bottler is weaker than the Coke or Pepsi bottler and equal (in ounces) to the store brand begs the question: "What is the minimum sales level for a bottler to be considered an insider in an implicit coalition?" Because sales among the three strongest bottlers are unequal, perhaps no implicit coalition exists. Yet, mathematical equality may be an overly strict requirement and the RC/7Up bottler's sales may be sufficient for its inclusion in a coalition of strong bottlers. Perhaps the RC/7Up bottler's potential as a spoiler is sufficient to grant it insider status. Alternatively, a higher margin for the RC/7Up bottler may compensate for a lower volume relative to the Coke and Pepsi bottlers.

Thus, the answer to Question #2 also is "yes"; there is rough competitive parity among strong bottlers. Depending on the measure, sales for the RC/7Up bottler either lag far behind (in ounces) or somewhat behind (in dollar) sales for the Coke and Pepsi bottlers. In all but one case, the three strong bottlers sell significantly more than the weak bottlers.

Question #3: Do Strong Bottlers Benefit from Asymmetric Competitive Draw?

If asymmetric competitive draw underlies promotions, then cross-promotion elasticities between strong and weak bottlers should show asymmetric patterns amplified by promotion

frequency (Bronnenberg and Wathieu 1996; Sethuraman, Srinivasan, and Kim 1999; Sivakumar and Raj 1997). The implicit coalition explanation of promotions implies asymmetric cross-effects between strong and weak rivals. Strong rivals have incentives to decouple their profitability from one another; to the extent they are successful, asymmetric cross-promotion effects are possible.

To test for asymmetric competitive draw, an index of promotion effects, which is a sum of *the significant promotion elasticities for each bottler* times *the frequency of each promotion*, was developed. Brand interdependence implies strong bottler promotions should have a more negative effect on weak bottler sales than the effect (if any) that weak bottler promotions have on strong bottler sales. In addition, to the extent strong bottlers decouple the negative effect of promoting among themselves, they should have own-promotion effects that are greater than the sum of cross-promotion effects, i.e., promotions should produce a net benefit for strong bottlers. In contrast, weak bottlers should have cross-promotion effects that are negative and greater in absolute value than their own-promotion effects.

Model.

To assess own- and cross-effects in the form of elasticities, four parallel regression equations were estimated at the store-week level of aggregation.

$$Coke_{ij} = C_1 + CL_{ij} + CS_{ij} + CF_{ij} + PL_{ij} + PS_{ij} + PF_{ij} + RL_{ij} + RS_{ij} + RF_{ij} + WL_{ij} + WS_{ij} + WF_{ij} + ACV_i + BigChain_{ij} + CDD_j + CDDPW_j + Holiday_{ij} + CFH_{ij} + PFH_{ij} + RSH_{ij} + WSH_{ij} + CBFHBC_{ij} + PBFHBC_{ij} + RBFHBC_{ij} + WBFHBC_{ij}$$

$$Pepsi_{ij} = C_2 + CL_{ij} + CS_{ij} + CF_{ij} + PL_{ij} + PS_{ij} + PF_{ij} + RL_{ij} + RS_{ij} + RF_{ij} + WL_{ij} + WS_{ij} + WF_{ij} + ACV_i + BigChain_{ij} + CDD_j + CDDPW_j + Holiday_{ij} + CFH_{ij} + PFH_{ij} + RSH_{ij} + WSH_{ij} + CBFHBC_{ij} + PBFHBC_{ij} + RBFHBC_{ij} + WBFHBC_{ij}$$

$$RC/7Up_{ij} = C_3 + CL_{ij} + CS_{ij} + CF_{ij} + PL_{ij} + PS_{ij} + PF_{ij} + RL_{ij} + RS_{ij} + RF_{ij} + WL_{ij} + WS_{ij} + WF_{ij} + ACV_i + BigChain_{ij} + CDD_j + CDDPW_j + Holiday_{ij} + CFH_{ij} + PFH_{ij} + RSH_{ij} + WSH_{ij} + CBFHBC_{ij} + PBFHBC_{ij} + RBFHBC_{ij} + WBFHBC_{ij}$$

$$Weak_{ij} = C_4 + CL_{ij} + CS_{ij} + CF_{ij} + PL_{ij} + PS_{ij} + PF_{ij} + RL_{ij} + RS_{ij} + RF_{ij} + WL_{ij} + WS_{ij} + WF_{ij} + ACV_i + BigChain_{ij} + CDD_j + CDDPW_j + Holiday_{ij} + CFH_{ij} + PFH_{ij} + RSH_{ij} + WSH_{ij} + CBFHBC_{ij} + PBFHBC_{ij} + RBFHBC_{ij} + WBFHBC_{ij}$$

where:

i = store number, varying from 1 to 37;

j	=	week, varying from 1 to 52;
Coke	=	log of the Coke bottler's total in-store sales in ounces;
Pepsi	=	log of the Pepsi bottler's total in-store sales in ounces;
RC/7Up	=	log of the RC/7Up bottler's total in-store sales in ounces;
Weak	=	log of the aggregated weak brands' total in-store sales in ounces;
C_1	=	the intercept term for the Coke bottler;
C_2	=	the intercept term for the Pepsi bottler;
C_3	=	the intercept term for the RC/7Up bottler;
C_4	=	the intercept term for the Weak bottlers;
CD	=	dummy variable (= 1) when the Coke bottler has a display CMA promotion;
CS	=	dummy variable (= 1) when the Coke bottler has a secondary CMA promotion;
CF	=	dummy variable (= 1) when the Coke bottler has a feature CMA promotion;
PD	=	dummy variable (= 1) when the Pepsi bottler has a display CMA promotion;
PS	=	dummy variable (= 1) when the Pepsi bottler has a secondary CMA promotion;
PF	=	dummy variable (= 1) when the Pepsi bottler has a feature CMA promotion;
RD	=	dummy variable (= 1) when the RC/7Up bottler has a display CMA promotion;
RS	=	dummy variable (= 1) when the RC/7Up bottler has a secondary CMA promotion;
RF	=	dummy variable (= 1) when the RC/7Up bottler has a feature CMA promotion;
WD	=	dummy variable (= 1) when the Weak bottler has a display CMA promotion;
WS	=	dummy variable (= 1) when the Weak bottler has a secondary CMA promotion;
WF	=	dummy variable (= 1) when the Weak bottler has a feature CMA promotion;
ACV	=	log of the ‘all category volume’ for the store-week observation;
BigChain	=	dummy variable (= 1) when the store-week observation is drawn from the market’s largest chain;
CDD	=	Cooling Degree Days during the week of the observation;
CDDPW	=	Cooling Degree Days during the week previous to the observation;

Holiday	=	dummy variable (= 1) if the observation occurred on one of eight holidays;
CFH	=	dummy variable (= 1) when Coke is on feature CMA promotion during a holiday;
PFH	=	dummy variable (= 1) when Pepsi is on feature CMA promotion during a holiday;
RSH	=	dummy variable (= 1) when RC/7Up is on secondary CMA promotion during a holiday week;
WSH	=	dummy variable (= 1) when Weak brands are on secondary CMA promotion during a holiday week;
CBFHBC	=	dummy variable (= 1) when Coke is on any type of CMA promotion during a pre-holiday week in the market's largest chain;
PBPHBC	=	dummy variable (= 1) when Pepsi is on any type of CMA promotion during a pre-holiday week in the market's largest chain;
RBRHBC	=	dummy variable (= 1) when RC/7Up is on any type of CMA promotion during a pre-holiday week in the market's largest chain; and
WBPHBC	=	dummy variable (= 1) when Weak products are on any type of CMA promotion during a pre-holiday week in the market's largest chain.

This model is simple in functional form, does not inflate R^2, is readily applied to an index of competitive effects, and allows more intense promotions to have higher elasticities than less intense promotions.[4] Proportionalizing response elasticities to stimuli intensity is an established practice (Totten and Block 1994) advocated by some marketing scholars (Mulhern and Leone 1991).

Store-level data were analyzed. Three promotion intensity (Display, Secondary, and Feature CMA promotions) dummy variables were extracted from the data for each of four bottlers (Coke, Pepsi, RC/7Up, and the aggregated Weak bottlers). Variation in promotion execution among stores suggested store ACV be included as an independent variable (Abraham and Lodish 1993). The BigChain variable accounts for the dominant sales and market power of one grocery chain. The holiday dummy variable captures the relatively higher holiday sales suggested by all obtained CMAs. The interaction of feature promotion with holiday for Pepsi and Coke bottlers (CFH and PFH) and secondary promotion with holiday for RC/7Up and Weak bottlers (RSH and WSH) account for the *helpful local bottlers'* belief that this combination boosted sales meaningfully.

Although the stock-up period for most soft drink holidays is one week, for some holidays, like July 4th, it is two weeks. A grocery chain's house brands and strong bottlers' brands compete when the chain promotes its house brands during pre-holiday weeks. This tactic allows the grocery chain to cherry pick much of the holiday-induced volume increase and charge a premium for a CMA

promotion during a holiday week. To capture these cross effects in pre-holiday weeks, the last four dummy variables indicate CMA promotions in the largest grocery chain during pre-holiday weeks.

Estimation Procedure

A two-stage estimation strategy was followed. In the first stage, store-level data were pooled into a cross-sectional time series and coefficients estimated with Fuller-Battese generalized least squares. Although estimating each bottler's coefficients separately can be criticized for ignoring interdependence across error structures (Mulhern and Leone 1991), the independent variables are identical for all equations; given the lack of cross-equation constraints, separate estimation and systems estimators are equivalent. Thus, the first-stage estimates allowed all independent variables an equal chance to explain sales.

In the second stage, all but one variable not significant at the 0.10 or better level were deleted and seemingly unrelated regression (SUR) was used to re-estimate the remaining coefficients. *Brand interdependence* theory and observations of bottlers' efforts to avoid using the same competitive tactics suggested that some of the 25 original variables would not be statistically significant. The second estimation stage allowed the appealing-yet-non-significant variables to be dropped so an equation structure with exogenous factors–such as weather, seasonality, and chain management–could be estimated.

Note that data were not adjusted for autocorrelation and no pooling test was performed. Because the index of cross-promotion effects was meant to be meaningful to the *helpful local bottler*, complicated data transformations and counterintuitive model specifications were avoided.

Stage One Results.

Table 4 shows first-stage results, which narrowed the analysis by identifying significant independent variables. Both OLS and GLS coefficients were computed for each equation and the equation system, which allowed computation of conventional goodness-of-fit statistics. In addition to conventional regression diagnostics, the signs implied by brand interdependence and microeconomic theories were also included. The frequency of each independent variable appears at the far left. The system adjusted R^2 of 0.709 is higher than in most comparable studies (i.e., 0.51 and 0.55 in Mulhern and Leone 1991; 0.60 in Kumar and Leone 1988). The fit for weak bottlers is surprisingly good because weak brands can produce adjusted R^2s 0.2 to 0.8 lower than strong brands (Blattberg and Wisniewski 1989). Store size is significant (<0.000) for all bottlers and holidays are significant for strong bottlers (<0.000) but not weak bottlers. The overall F statistic for each equation is significant ($p<0.000$).

TABLE 4: GLS PARAMETER ESTIMATES FOR PROMOTION RESPONSE MODEL
(Adjusted $R^2 = 0.709$)

GLS Results		Im-plied Brand Inter. Sign	Im--plied Micro. Econ	Coke Equation OLS adj. R^2 =.7262			Im-plied Brand Inter. Sign	Im-	Pepsi Equation OLS adj. R^2 =.6399			Im-plied Brand Inter. Sign	Im-plied Micro. Econ	RC/7UP Equation OLS adj. R^2 =.7354			Im-plied Brand Inter. Sign	Im-plied Micro. Econ	Weak Bottler Equation OLS adj. R^2 =.6660		
N	Variable	If Diff.	Sign	Estimate	SE	p-value	If Diff.	Sign	Estimate	SE	p-value	If Diff.	Sign	Estimate	SE	p-value	If Diff.	Sign	Estimate	SE	p-value
1615	Intercept			-2.3337	0.1678	0.0000			-1.3037	0.1874	0.0000			-4.3286	0.1835	0.0000			-0.2275	0.2404	0.3441
69	CD		+	0.0300	0.0108	0.0054		-	0.0033	0.0120	0.7870		-	0.0730	0.0118	0.0000		-	-0.0467	0.0154	0.0025
442	CS		+	0.1510	0.0139	0.0000		-	-0.0760	0.0155	0.0000		-	0.0255	0.0153	0.0953		-	-0.0405	0.0200	0.0425
572	CF		+	0.1443	0.0163	0.0000		-	-0.1193	0.0182	0.0000		-	-0.0351	0.0178	0.0494		-	-0.0518	0.0234	0.0269
739	PD		-	-0.0326	0.0111	0.0033		+	0.0075	0.0124	0.5471		-	-0.0196	0.0121	0.1060		-	0.0252	0.0159	0.1126
413	PS		-	-0.0693	0.0140	0.0000		+	0.1361	0.0157	0.0000		-	0.0031	0.0154	0.8390		-	-0.0373	0.0201	0.0640
521	PF		-	-0.1225	0.0161	0.0000		+	0.1708	0.0180	0.0000		-	-0.0311	0.0176	0.0769		-	-0.0152	0.0230	0.5100
395	RD		-	0.0137	0.0120	0.2485		-	-0.0024	0.0134	0.8606		+	0.0417	0.0131	0.0015		-	-0.0270	0.0172	0.1169
234	RS		-	0.0182	0.0160	0.2548		-	-0.0305	0.0178	0.0880		+	0.1361	0.0175	0.0000		-	-0.0415	0.0229	0.0701
311	RF		-	0.0036	0.0165	0.8291		-	-0.0377	0.0184	0.0407		+	0.2601	0.0180	0.0000		-	-0.0662	0.0236	0.0051
517	WD	?	-	0.0255	0.0109	0.0196	?	-	-0.0219	0.0122	0.0732	?	-	0.0074	0.0120	0.5377		+	-0.0001	0.0157	0.9950
148	WS	?	-	-0.0053	0.0198	0.7897	?	-	-0.0200	0.0221	0.3649	?	-	-0.0665	0.0217	0.0022		+	0.2612	0.0284	0.0000
33	WF	?	-	-0.0909	0.0349	0.0093	?	-	-0.0153	0.0390	0.6940	?	-	-0.1119	0.0378	0.0031		+	0.4825	0.0495	0.0000
1615	ACV		+	1.0485	0.0240	0.0000		+	0.9081	0.0267	0.0000		+	1.2776	0.0261	0.0000		+	0.7147	0.0342	0.0000
243	Big Chain		+	0.0331	0.0195	0.8970		+	-0.0196	0.0217	0.3671		+	-0.6722	0.0213	0.0000		+	0.5647	0.0280	0.0000
1615	CDD		+	0.0004	0.0003	0.2597		+	0.0015	0.0004	0.0001		+	0.0009	0.0004	0.0085		+	0.0034	0.0005	0.0000
1615	CDDPW		+	0.0001	0.0003	0.6868		+	-0.0006	0.0004	0.0911		+	0.0002	0.0004	0.6085		+	0.0012	0.0005	0.0146
235	Holiday		+	0.0498	0.0241	0.0396		+	0.0023	0.0270	0.9313		+	0.0672	0.0264	0.0010		+	-0.0253	0.0345	0.4630
76	CFH		+	0.0223	0.0348	0.5222		-	0.0552	0.0389	0.1559		-	-0.0201	0.0382	0.5967		-	0.0007	0.0500	0.9664
75	PFH		-	-0.0271	0.0347	0.4347		+	0.0364	0.0388	0.3476		-	-0.0655	0.0380	0.0856		-	0.0708	0.0496	0.1557
32	RSH		-	-0.0458	0.0422	0.2777		-	-0.0564	0.0471	0.2320		+	-0.0560	0.0463	0.2265		-	-0.0428	0.0606	0.4796
33	WSH	?	-	0.0183	0.0433	0.6724	?	-	0.0495	0.0484	0.3066	?	-	0.1493	0.0475	0.0017		+	0.1725	0.0622	0.0056
15	CBFHBC		+	-0.0146	0.0669	0.8272		-	-0.0468	0.0748	0.5316		-	-0.0208	0.0734	0.7769		-	0.0764	0.0961	0.4266
17	PBFHBC		-	-0.0195	0.0697	0.7764		+	0.0558	0.0767	0.4667		-	-0.0757	0.0753	0.3147		-	0.1106	0.0986	0.2611
16	RBFHBC		-	0.0741	0.0751	0.3244		-	0.1503	0.0839	0.0734		+	0.0754	0.0823	0.3602		-	-0.1500	0.1079	0.1644
2	WBF HBC	?	-	-0.2037	0.1575	0.1962	?	-	0.3344	0.1759	0.0576	?	-	0.1096	0.1727	0.5256		+	0.8304	0.2262	0.0002

Cross-promotion effects are usually weaker than own effects. Several unexpected signs (e.g., cross-promotional effect of RC/7Up on Coke) are unexplained by either brand interdependence or microeconomic theories. BigChain was significant for only three of four bottlers, and *increased sales during holidays* was significant for only two of four bottlers. Perhaps promotion stimuli, when correctly accounted for, produce little incremental sales during holidays (Totten and Block 1994). Non-significant variables (with the exception of the weak bottler intercept) were dropped for the second analysis stage.

Stage Two Results.

The SUR estimates in Table 5 show the significant effects of promotions among bottlers. In all but four cases, elasticity signs are consistent with microeconomic theory. Two signs–store brand display promotions relate positively to Coke sales and store brand feature promotions on holidays relate positively to RC/7Up sales–conform with brand interdependence rather than microeconomic theory (i.e., store brand promotions make customers aware of soft drinks, and once aware of soft drinks, loyal customers buy their preferred brand). The relationship between weather (temperature) and demand in the previous week (CDDPW) is non-significant. Finally, the estimated coefficient of BigChain for the RC/7Up bottler suggests that larger ACV stores produce greater sales for the RC/7Up bottler, yet large BigChain stores produce 9% lower sales.

TABLE 5: SUR PARAMETER ESTIMATES FOR PROMOTION RESPONSE MODEL
(Adjusted R^2 = 0.707)

SUR Results		Im-plied Brand	Im-plied Micro.	Coke Equation OLS adj. R^2 =.7263			Im-plied Brand	Im-plied Micro.	Pepsi Equation OLS adj. R^2 =.6402			Im-plied Brand	Im-plied Micro.	RC/7UP Equation OLS adj. R^2 =.7361			Im-plied Brand	Im-plied Micro.	Weak Bottler Equation OLS adj. R^2 =.6668		
N	Variable	If Diff.	Sign	Estimate	SE	p-value	If Diff.	Sign	Estimate	SE	p-value	If Diff.	Sign	Estimate	SE	p-value	If Diff.	Sign	Estimate	SE	p-value
1615	Intercept			-2.3596	0.1655	0.0001			-1.1782	0.1530	0.0001			-4.1646	0.1754	0.0001			-0.1510	0.2371	0.5243
869	CD		+	0.0292	0.0103	0.0046							-	0.0663	0.0111	0.0001		-	-0.0516	0.0150	0.0006
442	CS		+	0.1512	0.0129	0.0001		-	-0.0751	0.0150	0.0001							-	-0.0351	0.0195	0.0727
572	CF		+	0.1468	0.0128	0.0001		-	-0.1113	0.0162	0.0001		-	-0.0411	0.0150	0.0063		-	-0.0502	0.0184	0.0065
739	PD		-	-0.0289	0.0106	0.0065							-	-0.0192	0.0113	0.0907					
413	PS		-	-0.0652	0.0129	0.0001		+	0.1374	0.0149	0.0001							-	-0.0410	0.0184	0.0264
521	PF		-	-0.1277	0.0132	0.0001		+	0.1785	0.0159	0.0001		-	-0.0480	0.0155	0.0021					
395	RD												+	0.0441	0.0124	0.0004					
234	RS							-	-0.0342	0.0162	0.0352		+	0.1377	0.0151	0.0001		-	-0.0440	0.0209	0.0352
311	RF							-	-0.0333	0.0171	0.0521		+	0.2619	0.0158	0.0001		-	-0.0636	0.0206	0.0020
517	WD	?	-	0.0283	0.0107	0.0081	?	-	-0.0202	0.0118	0.0882										

TABLE 5: SUR PARAMETER ESTIMATES FOR PROMOTION RESPONSE MODEL
(Adjusted R^2 = 0.707)

SUR Results		Im-plied Brand	Im-plied Micro.	Coke Equation OLS adj. R^2 =.7263			Im-plied Brand	Im-plied Micro.	Pepsi Equation OLS adj. R^2 =.6402			Im-plied Brand	Im-plied Micro.	RC/7UP Equation OLS adj. R^2 =.7361			Im-plied Brand	Im-plied Micro.	Weak Bottler Equation OLS adj. R^2 =.6668		
N	Variable	If Diff.	Sign	Estimate	SE	p-value	If Diff.	Sign	Estimate	SE	p-value	If Diff.	Sign	Estimate	SE	p-value	If Diff.	Sign	Estimate	SE	p-value
148	WS											?	-	-0.0619	0.0204	0.0025		+	0.2665	0.0277	0.0001
33	WF	?	-	-0.0930	0.0327	0.0046						?	-	-0.0849	0.0361	0.0187		+	0.5021	0.0472	0.0001
1615	ACV		+	1.0536	0.0235	0.0001		+	0.8896	0.0215	0.0001		+	1.2580	0.0250	0.0001		+	0.7038	0.0338	0.0001
243	Big Chain		+	0.0291	0.0179	0.1054							+	-0.0902	0.0195	0.0001		+	0.5670	0.0255	0.0001
1615	CDD							+	0.0015	0.0004	0.0001		+	0.0009	0.0003	0.0002		+	0.0034	0.0005	0.0001
1615	CDD PW							+	-0.0005	0.0004	0.1673							+	0.0013	0.0005	0.0062
235	Holiday		+	0.0536	0.0137	0.0001							+	0.0638	0.0189	0.0008					
76	CFH																				
75	PFH												-	-0.0457	0.0313	0.1446					
32	RSH																				
33	WSH											?	-	0.1445	0.0442	0.0011		+	0.1437	0.0564	0.0109
15	CBFH BC																				
17	PBFH BC																				
16	RBFH BC							-	0.1516	0.0555	0.0064										
2	WBFH BC							-	0.2940	0.1540	0.0565							+	0.9157	0.2028	0.0001

To calculate cross effects, the non-zero elasticities in Table 5 were multiplied by their respective occurrence frequency. The own- and cross-effects for each bottler were then summed to produce Table 6. As posited, strong bottlers have a greater negative effect on weak bottlers; specifically, strong bottlers affect weak bottlers by 43.33 units more than weak bottlers affect strong bottlers. Summing figures within the columns of Table 6 produces a measure of *own promotion* versus *relative promotion* effects. The net promotion effect is +72.30 units for the Coke bottler, +27.12 units for the Pepsi bottler, and +114.93 units for the RC/7Up bottler (largely because its sales increase when Coke runs display promotions). In contrast, the net effect is -72.81 for weak bottlers.

Because strong bottlers benefit from asymmetric competitive draw vis-à-vis weak bottlers, the answer to Question #3 also is "yes." Strong bottlers' dominance is as much a product of promotion frequency as of asymmetric cross-promotion elasticities. Strong bottlers' advantages are amplified by their promotion regimes. For example, the competitive draw from Coke when a weak bottler runs a feature promotion is -9% of sales, which is almost as large as the -12.25% competitive draw when Pepsi runs a feature promotion. However, weak bottlers ran only 38 feature promotions,

so the net effect of Coke's far more numerous 572 feature promotions is much greater. In addition, the model suggests that sales gains by bottlers during self-promotion periods are greater than sales losses during competitors' promotion periods. For example, Coke gains 14.68% in sales during its feature promotion periods and loses only 12.77% in sales during Pepsi's feature promotions. Similarly, Pepsi gains 17.85% in sales during its feature promotions and loses only 11.13% in sales during Coke's feature promotions. This result suggests that net sales gains for strong brands are encouraged by a strategy that limits sales of weak brands. Because the non-promoting strong bottlers enjoy higher prices on a significant share of annual sales, they reap revenue gains through effective price discrimination.

TABLE 6: INDEX OF PROMOTION EFFECTS

	Affect Sales Of			
Promotions By	Coke	Pepsi	RC/7Up	Weak
Coke	176.18	-96.85	34.05	-89.08
Pepsi	-114.81	149.74	-42.59	-16.92
RC/7Up	0.00	-15.92	131.10	-30.07
Weak	11.11	-9.85	-7.63	63.26

CONCLUSION

Our result–soft drink bottlers promote strong brands for a mixture of cooperative and competitive reasons–supports the *brand interdependence* framework, which uses asymmetric competitive draw to explain promotions as coopetition. This framework aptly characterizes the soft drink industry. As one former Pepsi executive said about competing with Coke, "When I worked at Pepsi, we thought of the market as ours, theirs [Coke's], and up for grabs. We wanted to get more than our fair share of what was up for grabs."

By basing our study on infinite horizon game theory (Lal 1990b) and prisoner's dilemma tournaments (Fader and Hauser 1988), we avoided temporal myopia. The customer information gathering explanation of promotions is ruled out by the longevity and nature of this market. Soft drink penetration is among the highest in grocery stores, and it is unlikely that enough nonusers exist to account for the intensity of observed promotions.

Framing promotions studies in terms of intermediate variables can be problematic, as managers may divert from analyzing profitability to analyzing intermediate issues like redemption rates, shipments, and costs (Neslin and Shoemaker 1983). Available data and the *brand interdependence* literature's focus on market share as the indicator of profitability encouraged us to

frame our study in terms of physical market shares and relative sales. Although a limitation, these variables are only once removed from profitability; most intermediate variables are two, three, or even more steps removed from profitability. As per Lal (1990), we incorporated wholesalers and retailers into a single game as well as integrated wholesale and retail roles in the functions billed by soft drink bottlers. To the extent that bottlers have similar costs and margins, our results should not be subject to confounding.

Of the four dominant rationales for promotion, we can exclude only customer information gathering. The *brand interdependence* approach can be recast as a combination of price discrimination and competition because strong brands compete for switchers at the same time they cooperate to preserve margins on loyal customers. The 20.28 CMA promotions per year (or one every 18 days) by strong bottlers make it hard to imagine how any customers purchase at a 'normal' price. Because roughly half (mean=49%) of strong bottler sales are on high-intensity CMA promotions, price and cost discrimination cannot be excluded.

As a possible alternative modeling approach and a possible future extension of this work, researchers could explore the use of more than one year of data and a vector autoregression (VAR) model. For an example of such modeling within the context of promotions, see Steenkamp, et al. (2005). Although the promoting brand varies each period in the model tested here, the set of promotions per se varied little throughout the year for which data was analyzed. The asynchrony of strong brand promotions implies that promotion intensity also varied little. A multi-year data set might provide sufficient variation by type of promotion—beyond variation in the promoter's identity—to extend this research with a VAR model. However, the focus here is on whether or not *asynchronous promotions for strong brands* is a rational coopetition strategy based on consumer reaction rather than supplier reaction.

ENDNOTES

1. Because this argument is rarely if ever validated empirically for specific products, the convention in the promotions literature has been to ignore whether a good is a stock-up or non-stock-up type (Litvack, Calantone, and Warshaw 1985) and to assume that promotion-induced sales will be unprofitable. Given the large sales increases associated with price promotions, promotions on stock-up goods can increase unit sales enough to compensate for smaller margins and thus increase profits for all retailers (Lilien, Kotler, and Moorthy 1992).

2. Although researchers often use the first five digits of the ten-digit UPC to identify rivals (Raju, Srinivasan, and Lal 1990), this approach fails for soft drink bottlers. Because bottlers–rather than syrup manufacturers–are the competitive actors in chain stores, and UPCs do not identify bottlers, isolating bottling rivals requires mapping UPCs to bottlers.

3. The bottler that specializes in change of pace brands (RC, 7Up, Dr. Pepper, Squirt, Vernors, and so forth) is indicated as RC/7Up.

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