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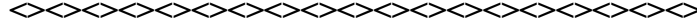
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Editorial Note

It is with deep sorrow in my heart that I present to you this special issue of JIBD in the memory of my late friend, Dr. Abbass Alkhafaji; co-founder of the International Academy of Business Disciplines, IABD Executive VP for the past 20 years, and absolutely instrumental in establishing the *Journal of International Business Disciplines*.

Many of us, who have been associated with the IABD, viewed Abbass Alkhafaji as a big brother, a friend, and a mentor; a man who always found tremendous joy in helping others and bringing people together; and that is how he will always be remembered.

I would also like to express my appreciation to the President of Frostburg State University, Jonathan Gibraltar; Dean of FSU *Business* at Frostburg State University, Danny Arnold; Board of Directors of IABD; and my distinguished colleagues who served on *JIBD* Editorial Board, for making this publication possible.

My special thanks to Kathleen O'Connor, editor; Louis Falk, web coordinator; Reza Eftekharzadeh, treasurer; and Robert Page, managing editor for their outstanding contribution towards completion of this task.

The Editorial Board members and I would like to devote this issue of JIBD to Abbass Alkhafaji, and wish for his soul to rest forever in peace.

Ahmad Tootoonchi, Chief Editor
Journal of International Business Disciplines

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A PRELIMINARY STUDY OF WEB SITE USAGE BY SMEs BASED IN KUALA LUMPUR, MALAYSIA

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ABSTRACT

The purpose of this research was to investigate the extent to which small- and medium-size businesses (SMEs) in the Kuala Lumpur region are prepared for Web site adoption. Most of the businesses have now accepted the Web site as an important tool for marketing and selling their products and services in the domestic and global market places. Companies can use Web sites to present almost unlimited information about themselves in cyberspace. Through judgment sampling, Kuala Lumpur was selected as the research area for this study. This study investigates the rate of usage of Web sites by the SMEs. The survey was conducted by mail, and the findings are summarized herein.

KEYWORDS: Web Site, Adoption, Kuala Lumpur, Malaysia

INTRODUCTION

A Web site is a location on the World Wide Web (WWW) that is owned and managed by an individual, company, or organization. It usually contains a home page and additional pages that include information provided by the site's owner, and may include links to other relevant sites (sunrise.uk.com). A Web site can be viewed locally and internationally. It is a new media used to exchange and gather information and ideas.

Companies have determined that a Web site is an important tool for business communication and transactions between business and the consumers (Udo & Marquis, 2000). A Web site allows companies to advertise their goods and services, to provide customer support, and to obtain feedback from their customers (Kent, 1998). Nevertheless, companies of any size and any sector can benefit from a Web site (Bell & Tang, 1998). According to Khairul and Ahmad (2005), a Web site can support multiple functions. It can be used as a platform for communication within the organization and between the organization and its external stakeholders. It also serves as a platform for operating Internet-based applications that can be useful to virtually any business

(Khairul & Ahmad, 2005). At the very least, companies can use Web sites to present to their customers almost unlimited information about themselves; to offer tools by which customers can select, process, and interpret this information; and to monitor the customer's information search process (Khairul & Ahmad, 2005; Huizingh, 2002).

LITERATURE REVIEW

Several studies on Web site adoption and usage have been carried out over the past few years. Using anecdotal evidence, Huizingh (2002) identified 12 antecedents as important factors for successful Web sites. He found that 10 of the companies (83.3%) cited Web site performance as an important variable. The other two antecedents showed no significant correlation with either of the two Web performance indicators. This study also differentiated Web site performance between B2B and B2C markets; however, no support was found for the importance of a transaction function. In addition, this study explored the correlation of antecedents with two indicators of Web site performance, number of visitors and overall satisfaction with the site. Results of bivariate and multivariate analysis found that both measures refer to different aspects of performance. Both performance indicators were found to be uncorrelated, only one antecedent is significant in both regression equations, and the bivariate analysis showed only one antecedent that to be significantly and positively related to both indicators.

Using a sample of 562 Malaysian public companies, Khairul and Ahmad (2005) examined the adoption rates of Web site and e-commerce technology in their companies. Out of 562 companies, 376 (67%) were found to have URLs. Upon completion of the URL accuracy, functionality and content eligibility tests, it was found that only 351 of these URLs were operable (62% of the 562 companies). The results of the study also reveal that, only 62% (351) were found to have operable Web sites; of the 351, 96% (336) were solely informational, leaving only 4 per cent (15) equipped for e-commerce transactions.

Many of the previous studies describe a single case study in detail (e.g., Parsons et al., 1998; Seybold & Marshak, 1998; Hartman et al., 2000). These studies examine the factors that influenced the success of Web sites. Recent survey studies have focused on characteristics that influence the attractiveness of individual Web pages, such as the background (Stevenson et al., 2000) and the complexity of a Web page (Bruner & Kumar, 2000). Bell and Tang (1998) survey study examined the effectiveness of their current Internet Web sites. The online survey of 60 companies found that 30% of the companies had facilities for conducting transactions online and only 7% charged users for Web site access.

Types of Web Sites

There are many different types of Web sites, for example, commercial, business, entertainment, informational, free goods, etc. However, several researchers have classified Web sites according to the static measures of what is included in them. Among these researchers, Quelch and Klein (1996), as cited in Khairul and Ahmad (2005), sorted Web sites into four types:

1. informational/domestic,
2. informational/global,
3. transactional/domestic, and

4. transactional/global.

They defined transactional Web sites as those that allow customers to order products and services online, while informational Web sites are those that contain information, allowing static- and perhaps also interactive-communications with their targeted segments.

Like other studies, Thelwall (2000) identified five types of Web sites as follows:

1. Web sites that contain only company information
2. Web sites that consist of both company and product information
3. Web sites that provide company, product, and pricing information
4. Web sites that contain all of the above information and provide other information necessary for customers to communicate with the company for the purpose of purchasing through mail order
5. Web sites that have all of the above features and allow online financial transactions

Recent Development of Information Technology by SMEs in Malaysia

SMEs (Hashim, 2000) are defined as firms employing 150 full-time employees or as those with annual sales not exceeding RM25 million, and as those that play a significant role in the country's economic development, particularly in the manufacturing sectors (Ramayah et. al., 2002). As of December 2005, 600,000 SMEs were registered in Malaysia (SME bank). Their contribution to the manufacturing sector was 29.3% of the total output or RM75.2 billion to GDP. Adoption of the Internet and WWW is considered a means of enabling these businesses to compete on a global scale with improved efficiency and closer customer and supplier relationships (Chong et al., 2001).

Malaysian SMEs have been relatively slow in Web adoption. According to MCA ICT Resource Centre (MIRC) as cited in Seow (2006) only 30% of SMEs in Malaysia have a Web presence and use IT extensively in their daily operations. This reflects a poor rate of IT adoption among the estimated 600,000 local SMEs. Most SMEs perceived the barriers of implementing IT into their business operations to be expensive initiative, risk, complex procedure, technical expatriate, and customer services (Yeung et al., 2003; Chong et. al., 2001; Pires and Aisbett, 2001). According to Soh et al. (1997), if SMEs in Malaysia adopted the WWW, the potential commercial functions that could be performed include marketing their company both locally and globally, gathering business information and consumer feedback, providing customer support, and conducting electronic transactions. On the other hand, if implementation of the WWW were to be successful, it would have severe repercussions on small businesses with limited resources (Chong et. al., 2001).

According to Ming (2006), most SMEs in Malaysia realize that ICT is critical to the productivity and performance of their companies. However, implementation and maintenance of these ICT systems is restricted due to inability to handle the load because of high staff turnover and a lack of ICT project management expertise. He also argues that, many family-based SMEs in Malaysian are still operating their business the traditional way. Consequently, SMEs that have invested in ICT systems fail to implement and maintain these systems successfully. Similarly, Tan (2006) argues that ICT in Malaysia is facing great challenges due to their slow adoption of

technology. He also suggests that SMEs must learn to adopt technology to increase their global competitiveness.

JUSTIFICATION FOR CHOOSING KUALA LUMPUR

For this study Kuala Lumpur was selected for data collection as it is the main business centre in the country and is equipped with modern facilities, such as fast Internet connections and advanced telecommunications systems, compared to other states in Malaysia (Siwar & Kasim, 1997). In addition, the study would face difficulties if it were conducted throughout Malaysia because there is a shortage of local databases of business information and a large sample is required to accurately reflect the study.

Kuala Lumpur has good facilities for businesses, for example, advanced telecommunications systems, modern business facilities, excellent road systems, and fast Internet connections (Siwar & Kasim, 1997). As a result, Kuala Lumpur provides a good business model in Malaysia, thereby attracting many large corporations to maintain a business presence there.

RESEARCH METHODOLOGY

A survey instrument was formulated to obtain feedback from SMEs in Malaysia, assessing their awareness, receptivity, and adoption of Web sites in their business. In order to focus on SMEs, lists were sought from the Small and Medium Industries Development Corporation (SMIDEC) on Malaysia Web sites. The surveys sent out were personally addressed to the managers of the SMEs. Because of the exploratory nature of this study, a cross-sectional approach was undertaken to measure the firms' responses regarding adoption of Web sites.

DATA COLLECTION

A total of 160 survey questionnaires, enclosing a return envelope, were mailed to randomly selected SMEs located in Kuala Lumpur and listed on the Small and Medium Industries Development Corporation (SMIDEC) Web site. Follow-up was conducted via telephone and e-mail since the response rate for mailed questionnaires was low, as expected. E-mail messages were sent to those who provided their e-mail addresses to SMIDEC. Telephone inquiries were conducted only three weeks later, as a last resort for those corporations that had not responded. The response rate for the mail survey was 66.25% (106 responses). The results were then processed and analyzed by using Statistical Package for the Social Sciences (SPSS).

RESULTS

TYPES OF BUSINESS

Of the 106 SMEs that responded to this survey, the majority (72.64% or 77) were in manufacturing industries. Respondents were involved in a wide range of products. The majority of small manufacturing firms processed food, or manufactured chemicals, electronics, plastic products, wood and wood products, pharmaceuticals, and rubber products. Other small industries were in legal, accounting, medical, logistics, insurance, financial, and consulting services. Other service businesses represented in the sample were sold goods (limited) and services. The

businesses in this category were, auto garages, computer services, beauty shops, and restaurants.

TABLE 1. GENERAL INFORMATION

No	Demographic Variables	No. of Respondents	%	Cumulative %
1.	Primary sectors			
	Manufacturing	77	72.64	72.64
	Service	29	27.36	100.00
2.	Computer Ownership			
	Yes	95	89.62	89.62
	No	07	6.60	96.22
	Missing	04	3.78	100.00
3.	Internet Access			
	Yes	61	57.54	57.54
	No	41	38.68	96.22
	Missing	04	3.78	100.00
4.	Length of Internet Access			
	Less than 5 years	42	68.85	68.85
	Above 5 years	19	31.15	100.00
5.	Most Popular Internet Browser			
	Internet Explorer	54	88.52	88.52
	Netscape	05	08.20	96.72
	Did not reply	02	3.28	100.00
6.	Education Level of the Manager/Owner			
	Master degree	33	31.13	31.13
	Bachelor degree	58	54.71	85.84
	Diploma or STPM degree	15	14.16	100.00
7.	Web Presence			
	Yes	44	41.50	41.50
	No	62	58.50	100.00
8.	Difficulty of English Usage			
	Yes	99	93.40	93.40
	No	07	6.60	100.00
9.	Preference of Language other than English			
	Bahasa Malay	38	35.85	35.85
	Chinese	59	55.66	91.51
	Tamil	06	5.66	97.17
	Others	03	2.83	100.00

COMPUTER OWNERSHIP

Majority of the respondents (89.63%) owned a computer. Seven businesses did not own a computer and data was missing for 4 respondents.

INTERNET ACCESS

There were 61 firms or 57.54% respondents with Internet access to their business. 41 respondents were not connected to the Internet. In terms of length of Internet access, 42 SMEs (68.85 per cent) had been connected to the Internet for 5 years or less and the remaining 19 (31.15 per cent) had been connected to the Internet for at least 5 years and more. The majority of respondents (88.52%) used Internet Explorer as their main Internet browser. The next most popular browser was Netscape with 5 respondents or 8.20% of respondents. Two respondents did not reply.

WEB PRESENCE

Of the sample firms, only 44 firms (41.50%) had a Web site. The majority of the firms did not have a Web site.

One of the concerns that this study wanted to address was to obtain information regarding the language barriers of Web site usage. Although, there is no formal hypothesis drawn in this study, it would have appeared logical to associate low rate of Web site adoption due to the English Language usage for almost all Web sites. The respondents were asked to indicate whether respondents have any difficulty in terms of English language while using the Web. Majority of the respondents 99 respondents or 93.40% respondents stated that they did not have any difficulty with the English language while using the Web. To support this, respondent's educational level was considered as one of the demographic variables. The survey results showed that a majority of the respondents had at least Bachelor's degree (58 managers, 54.71 per cent). Followed by 33 managers (31.13 per cent) with a Master's degree and the rest had either a diploma or STPM qualification. According to Abdulai, (2001) companies in Malaysia prefer to employ well-educated managers as they can acquire critical thinking skills. This study reveals that 55.66% of the respondents preferred Chinese as an alternative language to appear in Malaysian Web sites, followed by 35.84% and 5.66% of the respondents who preferred Bahasa Melayu and Tamil languages respectively.

TABLE 2. PURPOSES OF WEB SITE USAGE

No	Variables	No. of Respondents	%
1.	Obtain business information	71	66.98
2.	Reference materials	48	45.28
3.	Collection information on competitors	63	59.43
4.	Marketing of products/services	51	48.11
5.	Collecting or providing customer information	44	41.51
6.	Searching for or posting information on products	65	61.32
7.	To retrieve government information	14	13.21

PURPOSES OF WEB SITES USAGE

Respondents were asked to indicate the types of information collected by the SMEs from their Web sites. For this study, respondents were given nine options to choose from and we allowed selecting all that applied to their situation. Majority of the respondents (66.98%) used the Web to obtain business information. The most common usage of Web sites by the respondents were searching for or posting information on products (61.32%). Sixty-three respondents (59.43%) indicated that they used Web sites for collecting information on competitors. Of the SMEs, 48.11% used Web sites for marketing of their products and services. Out of 106 companies, 48 SMEs (45.28%) used Web sites for reference materials and 41.51% used Web sites for collecting and providing customer information. By gaining more information on the product, the respondents may find new ideas to make any new changes to the product. Only 14 respondents mentioned they were using Web sites to retrieve government information.

LIMITATIONS

As in all empirical research, the characteristic of this study has certain limitations in the applicability of the findings. Firstly, the empirical evidence was limited only to SMEs in Kuala Lumpur due to the heavy industrialization of this city. Therefore, it might be difficult to generalize the findings to other states in Malaysia due to social, infrastructural, and/or economic differences. Secondly, a cross-sectional analysis was applied for exploratory purposes about the characteristics of the SMEs according to their online business intentions. Nevertheless, a longitudinal study could be more useful in explaining whether these SMEs follow the process described. Thirdly, a more detailed questionnaire with more specific questions could be more helpful to gain a better description of the stages of Web site adoption. Finally, the data was obtained from a questionnaire sent and returned by mail, and hence the information obtained may have significant deficiencies.

MANAGERIAL IMPLICATIONS

This paper has some relatively important managerial implications. The findings of the research may have implications for IT consultants, vendors, and government agencies responsible for promoting innovation adoption and utilization. Therefore, IT consultants and vendors are advised to target their marketing to SMEs with a positive attitude towards innovation adoption.

In addition, it would be useful to study managers from SMEs in different geographical areas. This would provide some interesting information allowing us to see whether the adoption and utilization of the Web is influenced by geography, and whether that geographical influence is significant, this would allow IT consultants and vendors to tailor their service and products based on geographical issues, and would allow them a greater opportunity to increase the level of Web adoption.

CONCLUSION

This study has examined the preliminary online experiences by the SMEs in Malaysia, focusing specifically on the adoption and use of Web sites, the characteristics of adopters, and subsequent patterns of Web sites use. The study shows clearly that Malaysian SMEs are still lagging behind

in online usage compared to the developed countries. About 60% of respondents did not have Web site, and were therefore limiting their usage of online business due to their managers being reluctant to respond to innovations. With a better understanding of the potential benefits that Web applications can bring, Managers should develop a more favorable attitude and become more receptive to the idea of adopting the Web.

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TIME SERIES MODELS FOR FORECASTING THE DEMAND SIDE OF AN INNOVATION

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ABSTRACT

In this paper, we analyzed two sets of data (Cable television [TV] and wireless telephone) using time series and Bass diffusion models to forecast the demand side of an innovation, taking into consideration any cross correlation that may exist between supply and demand. Results show that a univariate third order autoregressive time series model was the best model for forecasting demand in the case of the wireless telephone data. This implies that the supply side in the form of the number of systems had no effect on the number of subscribers (demand side). These results are in agreement with the fact that there was no cross-correlation between supply and demand. However, in the case of cable TV, cross-correlation existed between supply and demand. In this case, a transfer function model, where supply in the form of number of systems was used as an input series, gave the best model for forecasting the number of subscribers. For both data sets, the time series models gave better forecast performance than the Bass model.

INTRODUCTION

Predicting the spread of an innovation is important in marketing and economic studies. Examples are the number of subscribers over time of innovations such as cable TV, the Internet, health clubs, telephone service, and the like. Retailers or providers make these services available to consumers at a subscription fee. Diffusion models have been used widely in marketing and economics research for forecasting the spread of an innovation. The majority of these models in marketing have focused on the demand side. On the other hand, diffusion models in economics have addressed the supply side (Stoneman & Ireland, 1983; Ireland & Stoneman, 1986). Meade and Islam (1998) considered 29 univariate models in the literature concerned with the diffusion of an innovation and used simulation to generate data from the different models for studying their forecasting performance. Jones and Ritz (1991) reported on a one-way interaction between the adoption process of retailers (movie theaters) and consumers (movie viewers). Jones and Mason (1990) considered a model for the joint adoption process of retailers and consumers in the area of electronics. Dodds (1973) dealt with the diffusion of subscriber services and used the Bass (1969) model to develop a long-term forecast of cable TV in the United States. Rajkumar and Kumar (2002) used the continuous version of the Bass model and a search technique to

forecast time to peak sales and future sales of cellular phone from seven western European countries.

Skiadas and Giovani (1997) introduced stochasticity into the Bass model to forecast the growth of electricity consumption in Greece. Fok and Franses (2007) used a Bass type diffusion model to forecast the diffusion of scientific publications in *Econometrica* and the *Economics journal*. A Bass diffusion model and diffusion by analogy were compared in forecasting the number of mobile service subscribers in Asia Pacific countries. The Bass model was found to perform better than modeling by analogy, which is used in practice.

Hu and Xu (2005) presented a multistage dynamic model to forecast Internet adoption. They showed that the multistage Mesak model and the Bass model are specific cases of their model. Ho, Savin, & Terwiesch (2002) extended the Bass model under a supply constraint and applied the model to determine the size of the capacity of a firm and the time to market its new product. Wang and Chang (2002) applied the Norton and Bass multigeneration diffusion model to forecast adoption of pagers and mobile phones in Taiwan. They found that the use of unequal coefficients across generations improved considerably the forecast performance of the model.

Previous research on the modeling of subscriber services using diffusion models has not considered the issue of relationship between retailers and consumers (Kim, Mahajan, & Srivastava, 1995; Mesak & Clark, 1998; Rai, Ravichandran, & Sammadar, 1998). Bronnenberg Mahajan, & Vanhanoeker (2000) presented results suggesting the existence of feedback between market share and distribution in the early growth stage of the product. Hirschman and Stampfl (1980) indicated that information on the adoption process of consumers by means of sales figures is an indication of consumers' acceptance of the product, which can influence the decision making process of the retailer. Similarly, in subscriber services the level of consumer adoption may influence the number of retailers or service-providers. Allowing for a feedback or cause and effect relationship between supply and demand in a model may improve forecasting of new products or services.

In this paper, we apply and compare time series and Bass diffusion for modeling and forecasting the demand side of an innovation (exemplified by cable TV and wireless telephone) taking into consideration any cross correlation that may exist between supply and demand.

TIME SERIES MODELS

In time, series analysis situations arise where one has an input and an output series. Examples include subscribers and suppliers (for cable TV or wireless phone), where subscribers may be considered the output series and suppliers the input series. The interest is in modeling and forecasting the number of subscribers. If the input series has no effect on the output series, one may model the output series using univariate ARIMA or the Bass model. If the input series has an effect on the output series, then a transfer function model can be used. This expresses the output series (y_t) as a function of the input series (x_t). Specifically, the output and input series are related linearly as

$$y_t = v(B)x_t + n_t \quad (1)$$

where $v(B) = \sum_{j=-\infty}^{\infty} v_j B^j$ is referred to as the transfer function and n_t is noise (Box & Jenkins, 1976).

On the other hand, if there is a feed back between the output and input series, in order to allow for this feedback, it is necessary to use a bivariate time series approach. One approach to modeling and forecasting stationary multivariate time series is the state space methodology as discussed by Akaike (1976). Any autoregressive moving average (ARMA) process has a state space representation and any state space form can be expressed as an ARMA process (Akaike, 1974). The form of the state space model is often expressed as (Wei, 1994)

$$Y_{t+1} = F_t Y_t + G e_{t+1} \quad (2)$$

$$X_t = H Y_t \quad (3)$$

where Y_t is a state vector of dimension $k \times 1$, F_t is a $k \times k$ transition matrix, G is a $k \times r$ ($r \leq k$) input matrix, e_{t+1} is an $r \times 1$ input vector to the system, H is an $r \times k$ output or observation matrix, and X_t is the $r \times 1$ output vector of observed variables. The input vector e_{t+1} is a sequence of independent normally distributed random vectors with mean 0 and an $r \times r$ variance – covariance matrix, $\sum_{ee}$. In the Akaike (1976) approach, Equation 2 is used to represent the state space process where the first r elements of Y_t consist of the output vector X_t and the last $k-r$ elements consist of the forecast elements $X_{t+k|t}$. Hence,

$$X_t = [I_r, 0] Y_t \quad (4)$$

and the first r rows and columns of G consist of the identity matrix, I_r .

The canonical correlation procedure is used for the identification of the state vector (Akaike, 1976). The procedure entails fitting vector autoregressive models to the multivariate time series and choosing the model that gives the smallest Akaike information criterion (AIC). The autoregressive model of order or lag p is then used in the canonical correlation analysis. The elements of the state vector are determined through a sequence of canonical correlation analyses which correlate present and past observations of the time series with a step wise increasing number of predicted values into the future. Future predicted values that yield significant correlations are included and those that yield insignificant correlations are excluded from the state vector. Once the state vector is determined, it is fit to the data and the parameters in the F , G , and $\sum_{ee}$ matrices are estimated by maximum likelihood. After the parameters are estimated, forecasts of X_t are computed recursively from the conditional expectation of Y_t . The m step ahead forecast $Y_{t+m|t}$ is given by

$$Y_{t+m|t} = F^m Y_t = F Y_{t+m-1|t} \quad (5)$$

DIFFUSION MODEL

An alternative approach to studying the relationship between two series is the use of diffusion models (Bass, 1969; Mesak & Darrat, 2002). In studying the nature of the relationship between

retailers and consumers, exemplified by the number of firms/systems (retailers) and the number of basic subscribers (consumers), Mesak and Darrat (2002) used the following diffusion model:

$$S_t - S_{t-1} = (\alpha_0 + \alpha_1 S_{t-1})(a_0 + a_1 N_t - S_{t-1}) + e_1 \quad (6)$$

$$N_t - N_{t-1} = (\beta_0 + \beta_1 N_{t-1})(b_1 S_t - N_{t-1}) + e_2 \quad (7)$$

where S_t = number of cable systems or retailer outlets by end of year t , N_t = number of subscribers by the end of year t , e_1 and e_2 are random errors, and the α 's, β 's, a 's and b_1 are parameters or constants to be estimated. This model is similar to models proposed by Jones and Masons (1990) and Jones and Ritz (1991). Equation 6 and 7 must be estimated simultaneously because of the cross dependency of S_t and N_t . In this situation, nonlinear ordinary least-squares gives inconsistent estimates of the parameters. To obtain consistent parameter estimates, one may employ two commonly used methods, the three-stage least squares, 3sls, (Gallant, 1987) or the full information maximum likelihood method, FIML, (Amemiya, 1977). The 3sls method requires specification of instrumental variables. These variables are chosen as regressors and need to be independent of the error terms. In the case of nonlinear regression, there is no standard method for choosing instrumental variables. However, for the model in Equations 6 and 7, instrumental variables are limited to lags of the endogenous variables (S_t and N_t) in the system. These lags, however, may not be adequate if there is serial correlation of the errors. The FIML estimation method does not require instrumental variables; hence, it was chosen for parameter estimation in this study. Note that once the parameters are estimated, one step ahead of forecasts are obtained by solving Equations 6 and 7 for N_t and S_t in terms of N_{t-1} , S_{t-1} and the parameter estimates.

The Bass model in discrete form (Bass, 1969) (may be viewed as a special case of Equation 7 is commonly used to study the spread or diffusion of a product or innovation. If we denote the number of subscribers at time t by N_t , then the Bass model in discrete form may be expressed as

$$N_t = a + (1 + b) N_{t-1} - c N_{t-1}^2 \quad (8)$$

where $a = px$, $b = q - p$, and $c = q/x$. Here, x is the ultimate number of subscribers in the population, p and q are what is called coefficients of innovation and imitation, respectively. It is seen that Equation 8 gives rise to a Bass model with $a = 0$ when b_1 is equal to zero.

Our interest in using the Bass model is for forecasting future number of subscribers rather than estimating p , q , and x as such. Equation 8 is a quadratic regression equation of N_t on its lag. In fitting the model to data, we have used ordinary least squares (with and without centering the data) and auto-regression. Usually, polynomial regressions of high order may be ill conditioned because of multicollinearity. Centering the independent variable may remove this problem (Montgomery, Peck, & Vining, 2001). For time series data, autocorrelation may exist which may cause the least squares estimates to be less reliable. In this case, auto-regression using the Yule-Walker estimation technique can give estimates that are more reliable in the sense of reduced standard errors. In the present case, multicollinearity and autocorrelation did not present a

serious problem and all three methods of estimation gave very similar results. Hence, we present forecast results from least squares.

DATA ANALYSIS

Time series analysis (univariate ARIMA, transfer function, and bivariate models) and Bass diffusion models were used to select the best models for forecasting the number of subscribers for two sets of data, cable TV, systems and subscribers (Figure 1) and wireless phone, systems and subscribers (Figure 2). The cable TV data were obtained from the Statistical Abstracts of the United States, in which one series (S_t) represents the number of TV systems over years and the other series (N_t) represents the number of subscribers in thousands. The data for wireless phone (Federal Communications Commission, 2001) represent the number of systems (S_t) and the number of subscribers (N_t) gathered every 6 months.

For these two series, the sample autocorrelation function (ACF) decayed very slowly, which indicated that the two series were not stationary and differencing, was required for the time series analysis (Wei, 1994). Hence, the analysis to choose the model and to estimate model parameters was performed on the first difference for each series. The first difference was stationary as indicated from the pattern of decay in the ACF and in the partial autocorrelation function (PACF). The software package SAS was used in the analysis of the differenced series.

For the univariate ARIMA analysis, a model was chosen based on the pattern of decay of the ACF and PACF. After an ARIMA model was identified, model parameters were estimated based on the data and forecasts were obtained from the model. For the transfer function approach where the number of systems was used as the input series and the number of subscribers as the output series, the first step was to identify a model that gave a good fit to the first differenced input series based on the decay pattern of the ACF and PACF. The second step involved computing the cross-correlation of the pre-whitened output and input series in order to identify the transfer function (Equation 1). The third step was to fit the transfer function model in Equation 1 and identify the ARIMA model for the output series from the pattern of decay of the ACF and PACF for the residuals. The fourth step was to fit and estimate the full ARIMA model.

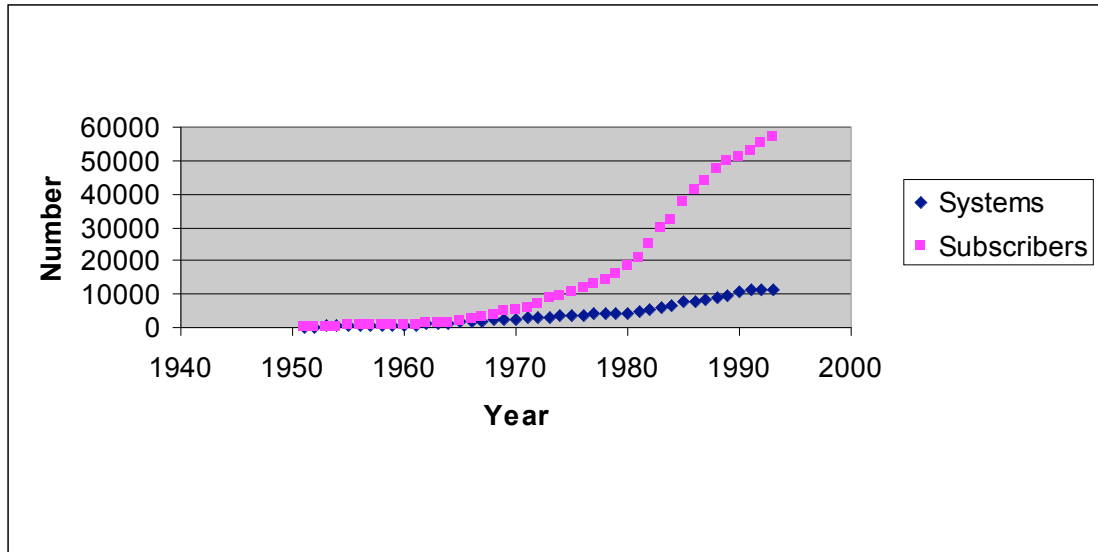


FIGURE 1. NUMBER OF SYSTEMS AND SUBSCRIBERS OVER YEARS FOR CABLE TELEVISION

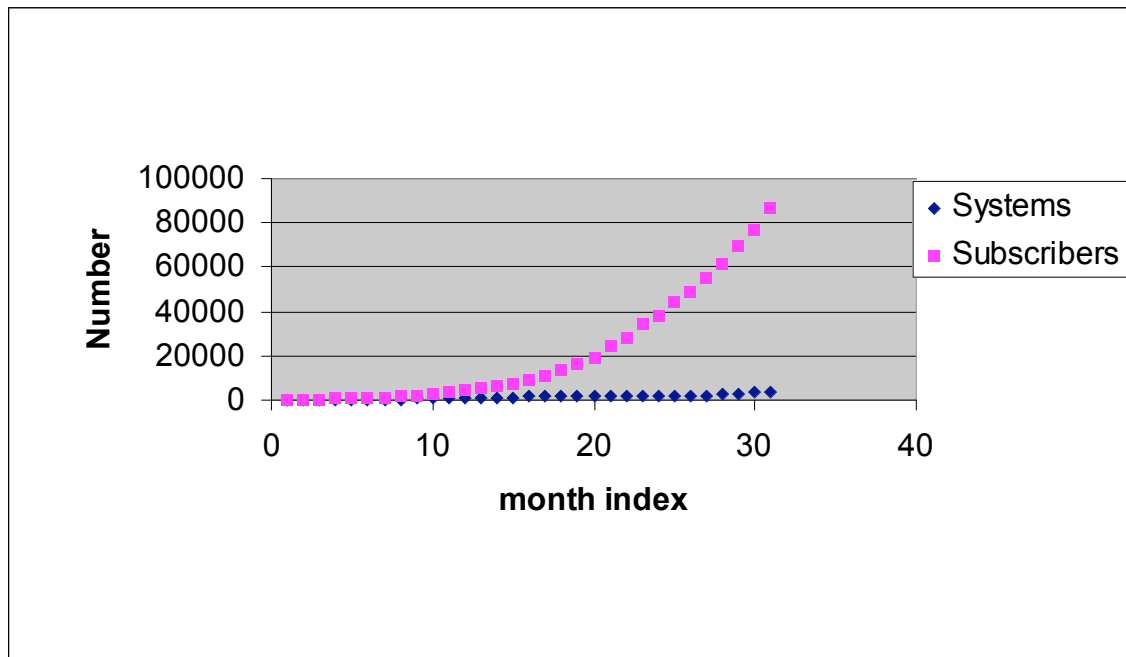


FIGURE 2. NUMBER OF SYSTEMS AND SUBSCRIBERS EVERY SIX MONTHS FROM 1984-1999 FOR WIRELESS

For the bivariate time series analysis, the Statespace procedure in SAS was used to select the model, estimate model parameters, and obtain forecasts. The FTML procedure in SAS was used to estimate model parameters for the diffusion model in Equations 6 and 7 and to obtain forecasts. For the univariate Bass model in Equation 8, the least squares regression procedure in SAS was used for parameter estimation and forecasts.

The adequacy of a chosen model was based on the autocorrelation check for residuals (a model is adequate if there is no significant autocorrelation among the residuals) and on the goodness of fit of model forecast of the last five points of each data set to their corresponding observed values.

RESULTS AND DISCUSSION

For the wireless data, the transfer function analysis indicated that the cross-correlation between the number of subscribers (as the output series) and number of systems (as the input series) was not significant. This meant that the number of systems had no effect on the number of subscribers and the best modeling strategy would be a univariate ARIMA (Wei, 1994). In fact, the best time series model in this case was an autoregressive model of order 3, AR(3),

$$N_t(1) = 0.893N_{t-1}(1) + 0.977N_{t-2}(1) - 0.865N_{t-3}(1) + a_t \quad (9)$$

Here, $N_t(1)$ represents the first difference.

TABLE 1. OBSERVED AND FORECAST VALUES OF WIRELESS PHONE SUBSCRIBERS (IN THOUSANDS) FOR THE BASS MODEL AND FOR THE AR(3) TIME SERIES MODEL.

Year	Month	Forecast: Five steps ahead	Forecast: Five steps ahead	Observed
		(Time series model)	(Bass model)	
1997	June	54559	53479	55312
1998	December	59015	57806	60831
1998	June	64482	61588	69209
1999	December	68404	64782	76284
1999	June	73222	67400	86047

Note: SSE-Bass/SSE-time series 2.178

Year	Month	Forecast: one step ahead	Forecast: one step ahead	Observed
		(Time series model)	(Bass model)	
1997	June	54559	53479	55312
1998	December	60378	54476	60831
1998	June	68072	66063	69209
1999	December	75940	76114	76284
1999	June	85862	83188	86047

Note: SSE-Bass/SSE-time series 27.889

The diffusion analysis using Equations 6 and 7 gave a b_1 estimate that was not significantly different from zero. Replacing b_1 by zero reduces the model to the Bass univariate model. As a result, the Bass diffusion model in Equation 8 was fitted to the number of subscribers and results

were compared to that of the AR(3) model. Table 1 presents the forecast values (five steps ahead and one step ahead) for the AR(3) and Bass model in Equation 8 with estimates $a = -37.41$ ($p = 0.778$), $(1+b) = 1.274$ ($p < .0001$), and $c = 0.00000359$ ($p < .0001$).

It is clear from the ratio of the sum of squares deviations (SSE) between observed and forecast values over the five years that the autoregressive model is much better than the Bass model in forecasting the number of subscribers whether the forecast is five steps or one step ahead. As expected, both models gave better forecasts for one step ahead than for five steps (SSE for five steps/SSE for one step = 11.39 for the time series model and 8.9 for the Bass model).

Analysis of the cable TV data indicated that there was a significant cross correlation for positive and negative lags between the pre-whitened output series (subscribers) and pre-whitened input series (systems). This indicated some feed back between number of subscribers and number of systems (Wei, 1994). As a result, we analyzed the bivariate time series data using statespace (Equations 2 and 3), the transfer function approach, Equation 1, and the bivariate diffusion model, Equations 6 and 7. The b_1 estimate in Equation 7 was not significantly different from zero. As a result, the univariate Bass diffusion model in Equation 8 was used instead to model the number of subscribers. The estimates for the model were $a = -24.63$ ($p = .878$), $1+b = 1.195$ ($p < .0001$), $c = 0.00000256$ ($p = .001$).

Table 2 presents the estimates of elements of the F matrix of Equation 2 from the statespace analysis. Forecasts were computed from Equation 5.

The transfer function model developed is given by

$$N_t(1-B) = W_0(1-B)S_t/(1-\delta B) + (1-\theta_1-\theta_2-\theta_3)a_t \quad (10)$$

Here, B is the back shift operator ($BN_t = N_{t-1}$), $W_0 = 3.72$, $\delta = 0.44$, $\theta_1 = -.145$, $\theta_2 = -.387$, and $\theta_3 = -.527$.

TABLE 2. ESTIMATES OF THE F AND G MATRIXES FROM EQUATION 2 IN THE TEXT

Parameter	Estimate	Standard Error
F (3, 1)	-.499	.187
F (3, 2)	.179	.028
F (4, 1)	-3.568	1.097
F (4, 2)	.997	.178
F (4, 3)	2.591	.631

Table 3 presents the forecasts (one step ahead and five steps ahead) for the three models from Equations 5, 8, and 10. It is clear from the ratios of sum square deviations between observed and forecast values over the 5 years that the best model is the transfer function model and the worst model in forecasting was the Bass model. As expected, the models gave better one step ahead

than five steps ahead forecasts (SSE-five steps/SSE-one step for the state space, transfer function, and Bass models were 3.98, 1.59, and 1.34, respectively).

It is interesting to see that in spite of the feed back relationship between cable TV subscribers and systems, the transfer function was a better model than the bivariate model for forecasting subscribers. The bivariate model is useful if one is interested in simultaneously forecasting supply and demand. However, as is seen from these results, if the interest is in forecasting demand only, then incorporating feedback into the model does not seem to make the forecast more accurate.

TABLE 3. OBSERVED AND FORECAST VALUES FOR CABLE TV NUMBER OF SUBSCRIBERS (IN THOUSANDS) FOR THE TIME SERIES MODELS (STATE SPACE AND TRANSFER FUNCTION) AND FOR THE BASS MODEL.

Year	Forecast: Five steps ahead - State space model	Forecast: Five steps ahead - Transfer function model	Forecast: Five steps ahead - Bass model	Observed
1989	49784	50457	47598	50800
1990	52474	52538	51053	51000
1991	54990	54303	54308	53000
1992	57121	56003	57319	55000
1993	59529	57533	60055	57000

SSE-state space/ SSE-transfer function 3.30

SSE-Bass/ SSE-transfer function 4.87

Year	Forecast: Five steps ahead - State space model	Forecast: Five steps ahead - Transfer function model	Forecast: Five steps ahead - Bass model	Observed
1989	50224	50457	47598	50800
1990	52705	52208	50558	51000
1991	52858	53326	52164	53000
1992	53929	53786	53017	55000
1993	56641	56476	54793	57000

SSE-state space/ SSE-transfer function 1.32

SSE-Bass/SSE-transfer function 5.82

CONCLUSION

This work involved using bivariate and univariate time series methodology and diffusion models to forecast the number of subscribers for cable TV and wireless phone. Both number of subscribers (demand) and number of systems (supply) were considered in developing the best models for forecasting the number of subscribers.

For the wireless phone data, there was no indication of any relationship between subscriber and system (or supply and demand) and the best model for forecasting the number of subscribers was the autoregressive model of order 3, Equation 9.

For the cable TV data, a feedback relationship existed between subscribers and systems (or between demand and supply). However, the best time series model for forecasting the number of subscribers was the transfer function model in Equation 10 that considered the effect of systems on subscribers, but not the effect of subscribers on systems. Considering feedback in a bivariate model is useful if one is interested in simultaneously forecasting supply and demand. Incorporating feedback did not seem to improve model accuracy in forecasting demand. The Bass model did not seem to forecast as accurately as either of the two time series models.

Data involving supply and demand are very difficult to obtain. Nevertheless, this modeling approach should be applied in the future to more data of this kind as they become available in order to determine the relationship between supply and demand and to develop the best model for forecasting the spread of an innovation. The emphasis in this paper was mainly on time series models. The Bass model arose as a special case of the model in Equation 7. There are several diffusion models in the literature that may be used for forecasting innovations some of which are extensions of the Bass model (Kumar & Krishnan, 2002; Ganesh, Kumar, & Subramanian, 1997; Bemmaor & Lee, 2002; Meade & Islam, 1998). Diffusion models are mechanistic in the sense that they are developed based on certain assumptions about the process. How well a diffusion model predicts a given process depends on how well these assumptions are met. On the other hand, time series models are empirical and flexible. They can be made to fit any given process. Therefore, it is important that the application of a diffusion model be gauged by comparing its performance to a time series model. Hence, future research may involve comparisons among time series and different diffusion models with regard to forecasting different innovations.

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FIT OF SPONSORSHIP AND ATTITUDE TOWARD SPORTS COMMERCIALIZATION AS PREDICTORS OF ATTITUDE TOWARD SPONSORING COMPANIES

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ABSTRACT

This quasi-experimental study tested the relationship between audience attitude toward sports commercialization and the resulting attitude toward sponsoring companies. An additional variable, “fit” or similarity between the sponsor and sporting team, was also tested for effects on spectator attitude. The theories of balance and context effects are presented for a theoretical framework. It is theorized that those with a lower attitude toward the commercialization of sports will have a higher resulting attitude toward the sponsor when exposed to a good use of sponsorship. This study involved 299 undergraduate students and found no contrast effects. A three-way interaction between the independent variables, attitude toward commercialization, type of sponsorship and the fit between the sponsor and sponsored event, influenced spectators’ resulting attitude toward the sponsor. The fit between the sponsor and sporting team was also found to play a significant role under certain conditions.

INTRODUCTION

Companies are beginning to realize the importance of not only having a good product or service, but also a positive corporate image, something they have found difficult to achieve with traditional marketing practices. Corporate sponsorship has been the result. Sponsorship has grown to be a multi-billion-dollar, business expenditure each year in the world. Sponsorship activities vary greatly from major sporting and cultural events to local community plays and little league teams. With this rapid growth, researchers are curious and companies are demanding to know the effectiveness of this promotional practice. The current research will focus on the spectator’s response to certain kinds of sponsorship at sporting events, thus giving companies a greater understanding of their target audience and assisting marketing and public relation practitioners in developing effective sponsorships.

In recent times, sponsorship has also grown in importance because of the rapid rise of advertising costs, recent tax breaks for subsidies, and governmental banning of certain advertising such as that imposed upon the tobacco industry (as cited in Wise & Miles, 1993/1994). Not only did sponsorship become a necessity as other mediums became more regulated, but the industry was ready for a new approach. In a professional survey of marketing practitioners, 75 percent desired to increase the use of sponsorship as a marketing tool (Lardinoit & Quester, 2001). Sponsorship has begun to form its own identity as a viable marketing and public relations tool. U.S. sponsorship expenditures have seen substantial growth in the past two decades. In 1985, American companies spent \$850 million on sponsorship, which increased to \$5.4 billion by 1996. Overall, global spending on sponsorship has grown from \$2 billion to \$13 billion in the same period (Meenaghan, 1996).

If companies are going to collectively spend \$13 billion trying to get their product or service some exposure to their target audience by using sponsorships, they have both a right and a duty to measure its effectiveness. However, bottom-line sales may not be the best yardstick to measure sponsorship success. While such an approach provides a tempting format of quick evaluation and results, sponsorship differs from many of its marketing siblings because its effects on less-objective, more long-term results. Rather than looking at bottom-line sales, perhaps management should be asking such questions as, “What effect does sponsorship have on the long-term feelings and attitudes of consumers towards my company and brand?” and “Will this sponsorship help improve the corporate image as a whole and not just improve current sales?” The vast majority of research conducted on corporate sponsorship has taken the marketing perspective and has thus been measured accordingly. However, the current study takes a PR approach to sponsorship, looking for audience responses, feelings, and attitudes.

REVIEW OF LITERATURE

DEFINITIONS AND ASPECTS OF SPONSORSHIP

D’Astous and Bitz (1995) defined sponsorship as an element of organizational communication where the organization, provides some financial support to an individual, an organization or a group, “to allow this entity to pursue its activities and, at the same time, benefit from this association in terms of global image and consumer awareness of the firm’s market offerings” (6).

From D’Astous and Bitz’s (1995) definition, two main forms of sponsorship emerge: philanthropic and commercial. In a literal definition, a philanthropic type of sponsorship would consist of the company providing financial or other support to the event or organization without any expectation of benefits to themselves. This has also been called an altruistic sponsorship. However, even when working with philanthropic-type sponsorships, such as charities, companies often have the dual-goal of portraying itself as fulfilling the role of the “community responsible,” (Meenaghan, 1996) as well improving the bottom line of sales and services.

The second type, commercial sponsorship, has been defined as, “A business relationship between a provider of funds, resources or services, and an individual event or organization that in turn offers rights and association for commercial advantage” (Cordiner, 2002, p. 14). In a typical commercial sponsorship, the sponsor will pay a fee or provide other support in products or services to the sponsee and the sponsee then allows the sponsor to be associated with the event

(Meenaghan, 1996). This underwriting of expenses from the company lowers the amount that the events or organization must generate on its own to cover expenses (Freedman & Feldman, 1998). The sponsor then gains certain rights to the event, such as the right to be the official soft drink, the right to have their logo on a program, and simply the right to be known as an official sponsor (Meenaghan, 1996).

USES, PURPOSES, AND CONCERNS OF SPONSORSHIP

Sponsorships differ in the amount of funding provided, participants involved, and what type of exposure they give the company (Mack, 1999). The use of sponsorship is highly regarded among companies as a tool to improve corporate communications and to enhance corporate identity, awareness, and image (Meenaghan, 1996). If companies are able to integrate sponsorship into their other business activities, the sponsorship has been found to be more effective (Cordiner, 2002).

With an increase in sponsorship possibilities, more companies are using sponsorship to fill a variety of corporate objectives. A 1996 study found that 93 percent of companies were spending money on building deeper relationships with their consumers with marketing practices such as sponsorship. Also, 89 percent of the businesses polled were seeking to improve their image and reputation while half of the respondents were looking to increase sales (as cited in Freedman & Feldman, 1998). A survey of top marketing managers ranked brand image enhancement, breaking free from traditional media clutter, and increasing brand awareness as the top purposes for commercial sponsorship. Although sponsorship is used to gain leverage with decision makers, government regulators, and employees, the overall goal of commercial sponsorship is a gradual, long-term effort to create brand awareness and improve company image in the eyes of consumers. Nevertheless, there are times when companies only seek to achieve bottom-line sales (Clark, Cornwell, & Pruitt, 2002; Javalgi, Traylor, Gross, & Lampman, 1994; Meenaghan, 1996). An increase of public goodwill (Wise & Miles, 1993/1994) and even an improvement in employee morale (Mack, 1999; Mason, 1992) are also goals of sponsorship.

Though more companies are now seeing sponsorship as a viable and potentially effective means of promotion, many are finding that the road to effective sponsorship isn't an easy one. The increased growth of sponsorship has resulted in sponsorship clutter (Meenaghan, 1996). This clutter makes it difficult for companies to distinguish themselves and for consumers to perceive the sponsorship. Even when sponsors are given adequate exposure, doubt remains as to sponsorship's effectiveness in reaching target audiences and improving that audience's perception of the brand and company. One study conducted by Crimmins and Horn (1996) found that, "most sponsorship investments go to waste" (p. 11). Reasons for inefficiency have been found to lie in the lack of clear objectives, not making the sponsorship part of the overall marketing plan, and not maximizing the sponsorship to its full value (Cordiner, 2002). Finally, "corporate sponsorship may have a novelty effect initially, but the effect may diminish over time" (Javalgi, et al., 1994, p. 55). Thus, sponsoring companies may see immediate gains, but that serious doubts have arisen as to the long-term benefits provided by sponsorship.

ATTITUDE TOWARDS THE SPONSOR AND CORPORATE IMAGE

However, some long-term benefits of sponsorship have been found. One of the long-term effects is the impression left on consumers following the sponsorship. This resulting attitude towards the sponsor makes up part of what is referred to as the “Corporate Image.” One of the main purposes for companies to use corporate sponsorship is to establish and improve the image of the brand and company. In fact, a survey of managers of companies involved in sponsorship found that, 54% did so with an objective to improve corporate image (Javalgi et al., 1994), making this a useful and vital topic of study.

While research conducted directly on the relationship between sponsorship and image is scant, one image related study conducted by Javalgi (1994) suggests that companies that do use sponsorship as a marketing tool have a better public image than companies that do not. The change is seen as gradual rather than immediate and as previous studies have found, companies with a good or neutral image can enhance that image by using sponsorship.

THE VARIABLE OF FIT

An additional possible component in explaining the relationship between sponsor and sponsored event is the similar values and characteristics shared by the company and the event being sponsored, called the “fit” between the two. D’Astous & Bitz (1995) held that the amount of association between the company and event is what makes sponsorship attractive in the first place. Sponsors look for events that have strong associations with their brand or company, and then use a positioning strategy to form a link between the two (Sponsors, 2002).

A major component determining the strength of a link is the similar values and characteristics shared by the company and the event being sponsored. If a company can tie in its core business into an event, the fit is strengthened and it can increase the image of the company being a responsible corporate citizen (Mason, 1992). This variable of fit between sponsor and sponsored event has yet to be tested to its effects on spectator response in a controlled environment when exposed to different forms of good and bad sponsorship.

SPONSORSHIP OF SPORTING EVENTS

Of all the possible venues for sponsorship, one of the biggest attractors of sponsors around the world each year is sporting events. Sports make up over two-thirds of total sponsorship revenue (Cordiner, 2002). One reason for sports sponsorships is that they offer a less cluttered setting as compared to the more traditional forms of marketing. Additionally, the sports fan is emotionally involved with teams, athletes, or events and the sports fans are a captive audience that is likely to be receptive to messages (Cordiner, 2002).

Additional benefits from a sporting audience include a large internal audience to the sponsorship and no limit to the social classes it may appeal to (Abratt, Clayton, & Pitt, 1987). Being the leading industry in sponsorship, sporting events make an effective example for research. In particular, the concept of an active and receptive group of spectators, differing from audiences of other sponsorships, makes them a proper sample for the current study.

RESEARCH ON ATTITUDES TOWARD SPORTS SPONSORSHIP

Previous studies have found that spectator responses to these sponsorships can be both positive and negative (Lee, Sandler, & Shani, 1997). It has been suggested by some that the fast-paced growth of sports sponsorship may lead to a negative attitude toward the sponsor by those who see sports as becoming more about money than athletics. These individuals see the commercialization as taking away from the actual event (Gwinner, 1997; Lee et al., 1997). Other studies find that when the sponsorship is seen as making an event possible, lowering ticket prices, or allowing more media coverage, the resulting attitude toward the sponsor will be positive (McDonald, 1991). The previous literature would lead us to believe that those holding a more positive attitude toward commercialization in sports would hold attitudes that are more positive toward the brand.

However, two recent studies have found results that contradict this conventional wisdom. Two separate studies of the Philadelphia Eagles show an inverse relationship between attitudes toward commercialization of sport and resulting attitudes toward sponsors (Eaton, Gwinner, Larson, & Swanson, 2001; Gwinner, Larson, Swanson, 2003). The researchers collected 612 questionnaires between the two studies of Eagle's fans at a sponsored pre-game event. Contrary to their expectations, both studies found that those with *negative* attitudes toward commercialization in sports had attitudes that were more *positive* towards the sponsor, were *more likely* to purchase from the sponsor, and were *more likely* to spread positive word-of-mouth information about the sponsor.

THEORETICAL FRAMEWORK

The surprising sponsorship effects on the audience found in the Eagles studies can begin to be understood by looking at the theoretical frameworks used in seeking to explain spectator response to sponsorship. A variety of theoretical frameworks and models have been used to accomplish the goals of sponsorship research.

BALANCE THEORY

The conventional belief about spectator response to sponsorship can be attributed to a simple balance theory. The basic model for balance theory involving social interactions was developed by Newcomb (1959, 1953) in a study of the interaction process of communication. Called the ABX model, this theory contains the following components: a communicative act, orientation, co-orientation, and system strain. Boswell and Dodd (1994) describe the relationship as "A communicative act in its simplest form involves transmission of information from one person (A) to another person (B) about something (X)" (p. 104). The term orientation refers to an attitude toward someone or something. Co-orientation is the balancing act one must do with A's interdependence on its attitude towards both B and X. System strain occurs when A's attitude toward B differs from A's attitude toward X. When system strain occurs, A will seek to bring the two attitudes into agreement, seeking cognitive consistency (Newcomb, 1953).

While balance theory was originally developed to explain interpersonal relationships, it has proven to be an effective tool when looking at the relationship between corporations and their consumers. The theory suggests that consumers value harmony in their perceptions and that any

incongruence between two perceptions causes disharmony that the consumer will seek to eliminate by reconciliation (Dean, 2002, p. 77).

Therefore, the balance theory can be applied to the sponsorship situation. Such a theory could look at a traditional sponsorship situation as three entities: the spectator (A), the sponsor (B), and the event being sponsored (X). Rather than apply the more complex interaction model, we simply look at spectators' attitudes toward the sponsored event and the sponsor. If a spectator attends an event, it can likely be assumed that the spectator has a positive attitude toward the event, especially in the case where a ticket must be purchased to attend.

Companies often use a simplistic view of the balance theory to decide which events to sponsor. For example, if a company finds that consumers have good feelings towards a charity and the company then supports that charity, the consumer should gain an improved perspective of the company. However, certain corollaries exist in congruity theory, stating that when two dissimilar entities are connected in the mind of the individual, the primary entity will draw the weaker one towards it (Dean, 2002).

However, more relevant to the current study is the changing of the X variable from the sponsored event to the consumers' held attitudes towards the commercialization of sports. Most spectators likely have a somewhat formed attitude towards the use of sponsorship in sports that has been formed by previous experience. If a spectator with a negative attitude towards the commercialization of sports then perceives a sponsorship that is done well, system strain will occur. The resolution of this strain is the subject of this study. Balance theory simply predicts that the spectator will adjust one or both attitudes to regain balance and reduce system strain, but does not predict the direction of the change.

CONTEXT EFFECTS THEORY

To predict the outcome of the resolution between a spectator's incongruent attitudes towards the commercialization of sports and the current sponsorship, another theory is needed. This same theory is also needed to explain more fully the inverse relationship found in the Philadelphia Eagles and other studies. The context effects theory, used in 1961 by Sherif and Hovland in their study on attitude change, suggests that when an individual encounters a new object, their judgment of it is influenced and distorted by previously held conceptions and perceptions. These perceptions are the ruler against which new objects are measured.

One type of context effects is a contrast effect, which occurs when the perception of the new object does not match the previously held perception of that variety of object. The resulting attitude toward the object can be drastically different than that which occurs when a positive attitude already exists (Brown & Dacin, 1997).

In applying the context effects theory to the Eagles studies, it is suggested that those spectators with a more negative attitude towards the commercialization of sports had a contrast effect when they perceived the sponsorship as "good." A "good" sponsorship as defined in the Eagles study as well as for the purpose of this study is one that is perceived as benefiting the team, fans, community and not overshadowing the event. A "bad" sponsorship is perceived as being self-serving to the company with the company being more interested in making money than

benefiting the event. Such a dramatic contrast led spectators with a negative attitude towards the commercialization to have an overall higher attitude toward the sponsorship than those that already had favorable attitudes.

However, the data from the Eagles research only supports the theoretical predictions of contrast effects. The test was not designed to test for its occurrence. It didn't measure whether these sponsorships were perceived as "good" or "bad." A controlled experiment with predetermined types and fits of sponsorship is necessary to test for these effects.

STATEMENT OF RESEARCH PURPOSE

The present study will test for similar attitudes towards sports commercialization and its effects on individual's views of specific sponsorship activities, controlling for type and fit of relationship between the sponsor and sponsored event. The following two hypotheses provide the framework for the study:

H1: When the sponsorship is perceived as "good," those holding negative attitudes towards commercialization in sports will have higher resulting views of the sponsoring company or brand than those with a more positive attitude toward commercialization in sports, thus resulting in a contrast effect (see Figure 1).

H2: When the sponsorship is perceived as "bad," those holding negative attitudes towards commercialization in sports will have lower resulting views of the sponsoring company or brand than those with a more positive attitude toward commercialization in sports (see Figure 1).

Both hypotheses make up the relationship predicted. This reverse relationship is the essence of the context effects theory and the findings of the Eagles studies. It predicts that those with a negative attitude towards the commercialization of sports will have a steeper change in attitude when they view a good as opposed to a bad form of sponsorship (see Figure 1).

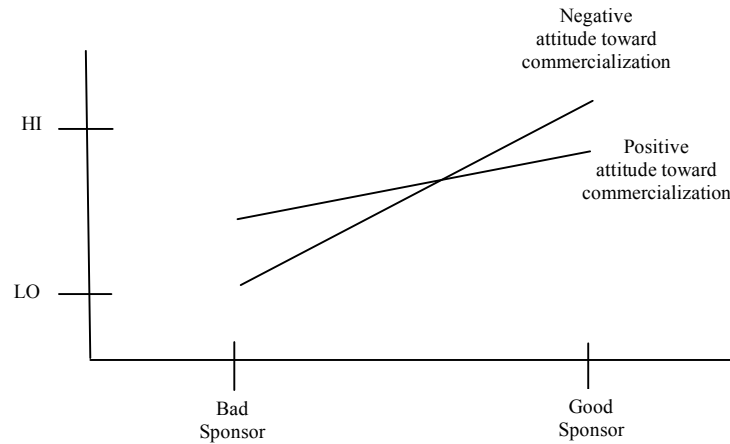


FIGURE 1. EXPECTED CONTEXT EFFECT RELATIONSHIP

ATTITUDE TOWARD THE SPONSOR

H3: A good “fit” between the sponsor and sponsored event will result in participants having a higher resulting attitude towards the sponsor than in the case of a poor fit.

This hypothesis is supported by previous findings, suggesting that the formation and strength of a “link” between sponsor and sponsored event is greatly increased when there is a high level of fit. Strong links have been shown to continually improve the effectiveness of a sponsorship (Harvey, 2001). Balance theory predicts this relationship as well. It is assumed that if an individual buys a ticket and attends a sporting event, that individual generally has a positive attitude toward the event. The more the sponsor is able to link with the event, the greater the chance the positive feelings of the spectator towards the event will be transferred to the sponsor (Mason, 1992).

Balance theory suggests that the stronger of the two attitudes will pull the weaker attitude towards it. Attitude toward the event will likely be the stronger of opinions, thus pulling the spectators attitude toward the sponsor in a positive direction. However, if the link between the sponsor and event is weak, such as would be the case in a poor fit, the attitude will not be affected.

METHODOLOGY

PARTICIPANT SELECTION

Participants were Kansas State University undergraduate students recruited from a variety of classes in the marketing and mass communications departments. Nearly one-half of participants came from a large, entry-level mass communications class in an attempt to gain participants with a variety of backgrounds and demographic characteristics. The only difference desired in the sample was their preconceived attitudes towards the commercialization of sports. Such a

difference in attitude was found among the participants, thus making them a valid sample for the purposes of this study.

INSTRUMENTATION

The instruments used in the study consisted of three questionnaires: two used in actual testing and a preliminary questionnaire designed to test the validity of material to be used in the other two questionnaires.

In the pretesting of possible questionnaire material, a pretesting instrument was developed that consisted of one of two hypothetical sponsorship scenarios similar to the scenarios in the questionnaire used in actual testing. The difference in the pretest scenario from those used in the final testing was that the element of “fit” was left out and thus when the scenario talked about the sponsor, a generic corporate name not suggesting one genre of product, “Merkley Partners, Inc,” was used. Pretests with a separate set of participants, similar in characteristics to the experimental group, were used to determine “good” and “bad” sponsorship scenarios as well as scenarios representing good and bad “fit” between sponsor and sponsored event.

The questionnaires used in the final experiment were made up of questions previously used in published research in measuring attitude toward the sponsor, assessment of fit, attitude toward the brand, and others used in unpublished research but highly relevant to this study. Questions on attitude toward commercialization were based on Lee et al.’s Olympic questionnaire (p. 165, 1997) that was used to test attitudes towards Olympic sponsorship and was then adapted to fit the purposes of this study (Cronbach alpha = .68). In addition, some new items developed to test participants previously held attitudes towards the commercialization of sports were added to the instrument. To test the fit of sponsor and attitude toward sponsor, questions were based on Speed and Thompson’s (2000) questions measurement scale of fit (alpha = .95) and attitude toward sponsor (alpha = .97). These measuring instruments have showed to be both reliable and valid in Gwinner et al.’s (2003) previous research with sponsorship and the Philadelphia Eagles.

Part 1 of the final questionnaire asked the respondents about their attitudes toward corporate sponsorship of sporting events. Part 2 of the questionnaire consisted of one of four possible scenarios involving a news story about a fictional minor league baseball team and a fictional possible corporate sponsor of their baseball park. It was assumed that participants in the study would have pre-conceived attitudes about existing companies and sporting teams and that these pre-conceived opinions may contaminate this type of study which is looking to isolate the effect of sponsorship, thus the sponsoring companies and baseball team were imaginary. The use of fictional sponsors and team with which the participants had no previous knowledge controlled for these confounding variables.

The four scenarios used in Part 2 were made up of one of four possible combinations of sponsorship type and sponsor fit: Good Sponsor/Good Fit, Good Sponsor/Poor Fit, Bad Sponsor/Good Fit, Bad Sponsor/Poor Fit. Below the hypothetical sponsorship scenario are four questions that determine attitudes toward the sponsor and the fit. Following these questions, there are two sets of questions, consisting of three questions each, one set asking for an overall opinion of the sponsor and one set asking for the opinion towards the baseball team. Each set of

three questions was combined to establish an overall attitude toward the sponsor and team for the dependent variable.

VARIABLES

In this study, the dependent variable was the resulting attitude of the participant toward the sponsor (Att2Spon) or sponsored team (Att2Team) following the reading of a fictional sponsorship. The principle independent variable in this study was the preexisting attitudes held by respondents towards the commercialization of sports (Att2Comm). Other independent variables were the existence of “bad” vs. “good” sponsorships (Type) as well as the strength of fit relationship between the sponsor and sponsored event (Fit) as described in the questionnaires used.

EXPERIMENTAL DESIGN

In the first half of testing, participants were given the Part 1 questionnaire to determine their preexisting attitude towards the sponsorship of sporting events (Att2Comm). Names were collected only so that part 1 and part 2 of the questionnaire could be combined. For 4 of the 5 classes of participants, there was a 1-week interlude between Part 1 and Part 2 questionnaires. For the final class, the interlude was 1 hour, because the class was added to increase the number of participants. However, the researchers determined that there was little if any possibility of participant learner effects between the two questionnaires and, thus, it was decided that the length of interlude had no effect on the results of the study.

The interlude was used to calculate the scores in Part 1 and to assign participants to scenario groups. The participants from all classes were treated as a whole, and the four scenarios were assigned out evenly according to the negative and positive Att2Comm results. Thus while individual classes may not have had equal distribution of scenarios, each of the scenarios made up roughly 25% of the Part 2 questionnaires given out to the total sample. At this point, all participants who completed Part 1 were assigned a Part 2 questionnaire. The cutting out of the middle part of the sample to have a high and low group in attitude toward commercialization was not done until the analysis phase, after all data had been collected. This was done to gather as much data as possible before determining which participants would be used in the final analysis.

Any Part 2 questionnaires received that were found not to have a corresponding Part 1 were set aside. Upon completion of the data entry, a search was done for participant mortality. From the original sample consisting of the first four classes, the researchers found an overall mortality of 51 participants, or 18% of the 279 individuals who completed Part 1. To ensure the most complete data set possible, clean-up efforts were initiated. Mortality or “Incomplete” lists for each class were compiled and questionnaires with the names of the missing participants written on them were created. Participants on the incomplete lists were then “tracked down” and asked to complete the missing questionnaire. A large percentage (46 of the 51 incomplete questionnaires) was completed reducing the mortality rate to 2%.

DATA ANALYSIS

A variety of methods were tested to determine which analysis would provide the clearest picture of the interactions occurring among the variables. It was determined that a two-way ANOVA with three between-group factors using SAS statistical software would best illustrate the interactions.

The final sample consisted of 299 participants who had completed both Part 1 and Part 2 questionnaires. To place participants in proper categories on the Att2Comm variable, a factor analysis was conducted on the Part 1 questionnaire. Two groups of questions emerged as testing similar factors. However, one group consisted of a larger number of questions that focused on an overall attitude toward corporate sponsorship in sports as opposed to the second group of questions that focused more on the sponsor's motivations. The first group also performed better at illustrating the significant interactions of the variables; thus, this group of questions was selected to distinguish a participant's Att2Comm. Summing the numbered answers that were given to each question created an index score of Att2Comm.

The participants' Att2Comm index scores, were used divide the sample into thirds and the middle third of the sample was removed, leaving 217 participants in the sample. This left a clear distinction of Att2Comm between the remaining two groups. Those in the top third were classified as having a NEGATIVE Att2Comm while those in the bottom third were classified as having a POSITIVE Att2Comm. This then allowed participants to be classified into treatment groups made up of the three variables: Att2Comm (Negative, Positive), Sponsorship Type (Good, Bad), and Fit (Good, Poor). Each treatment cell had a minimum of 21 participants, a sufficient number to run the necessary analyses (Stevens, 1992). The breakdown of participants per treatment cell is shown in Table 1.

TABLE 1. TREATMENT GROUP DISTRIBUTION

	Good Fit		Poor Fit	
	Good Type	Bad Type	Good Type	Bad Type
Neg. Att2comm	38	21	34	22
Pos. Att2comm	27	23	24	28

A two-way ANOVA with three between-group factors was then run on the resulting data. The results were viewed for significant two- and three-way interactions among the variables. These significant effects were then further tested with individual ANOVAs to find simple effects in an effort to gain the best understanding of the interactions.

In summary, the data gathered from the sample of participants was cleaned and organized according to the participants' Att2Comm score. The middle third of the sample was then removed to establish a clear distinction between the scores of those classified as having positive and negative attitudes towards the commercialization of sports. The Att2Comm variable was then added to the Type and Fit variables to view the resulting number participants in each treatment cell made up of the three independent variables. This then allowed the variables to be tested for interaction effects between and among the variables, broken down into simple effects.

This structure or organization of analysis allowed for several significant relationships and interactions to be found.

RESULTS

The data analysis conducted looked for several areas of statistical significance in order to support the hypothesis and to check for any significant interactions that had not been expected. The primary area of interest was the way respondents of differing Att2Comm would respond to both bad and good forms of sponsorship, hoping to find a contrast effect in the respondents' resulting Att2Spon. This was first done by looking at the Att2Spon and Att2Team means of the two Att2Comm groups (negative/positive) along all conditions of Sponsorship Type and Fit. The differences noted were then checked for significance using a two-way ANOVA. The other variable's influence that would be looked for was fit.

H1: When the sponsorship is perceived as "good," those holding negative attitudes towards commercialization in sports will have higher resulting views of the sponsoring company or brand than those with a more positive attitude toward commercialization in sports, thus resulting in a contrast effect.

H2: When the sponsorship is perceived as "bad," those holding negative attitudes towards commercialization in sports will have lower resulting views of the sponsoring company or brand than those with a more positive attitude toward commercialization in sports.

The initial two-way ANOVA produced a set of means that illustrated the differences between participant's Att2Comm and the two resulting dependent variables. Table 2 illustrates the means of the resulting Att2Sponsor and Table 3 shows the means of the participant's Att2Team. In each case, those with a positive Att2Comm had a higher Att2Spon and Att2Team than those with a negative Att2Comm, thus showing no contrast effect. This was a significant finding, showing that the effect of the interaction between Att2Comm and Type on resulting Att2Spon and Att2Team was the opposite of what was predicted in the hypotheses.

TABLE 2. ATTITUDE TOWARD THE SPONSOR GROUP MEANS

	Good Fit		Poor Fit	
	Good Type	Bad Type	Good Type	Bad Type
Neg. Att2comm	16.13	10.6	14.59	11.14
Pos. Att2comm	17.11	13.78	17.38	12.64

TABLE 3. ATTITUDE TOWARD THE TEAM GROUP MEANS

	Good Fit		Poor Fit	
	Good Type	Bad Type	Good Type	Bad Type
Neg. Att2comm	16.61	13.19	14.25	14.41
Pos. Att2comm	16.67	14.96	15.67	15.58

However, Table 4A and 4B illustrate a significant three-way interaction among the three independent variables and the dependent variable Att2Spon. This interaction would be broken down into simple effects in the next phase of analysis.

H3: A good “fit” between the sponsor and sponsored event will result in participants having a higher resulting attitude towards the sponsor than in the case of a poor fit. Table 4A and 4B illustrate that the variable of fit had some potential simple effects in interactions with the other independent variables as part of the three-way interaction.

TABLE 4A. ATTITUDE TOWARD THE SPONSOR

Source	DF	F Value	Pr > F
Att2Comm	1	25.02	<.0001
Type	1	102.49	<.0001
Fit	1	1.35	0.2464
Att2Comm*Type	1	0.26	0.6102
Att2Comm2*Fit	1	0.01	0.9062
Type*Fit	1	0.13	0.7167
Att2Comm*Type*Fit	1	4.15	0.0429

TABLE 4B. ATTITUDE TOWARD THE TEAM

Source	DF	F Value	Pr > F
Att2Comm	1	6.69	0.0104
Type	1	8.94	0.0031
Fit	1	0.79	0.3756
Att2Comm*Type	1	0.74	0.3891
Att2Comm2*Fit	1	0.19	0.6647
Type*Fit	1	9.29	0.0026
Att2Comm*Type*Fit	1	1.31	0.2533

DISCUSSION

The results will first be discussed in connection with the established hypotheses and research question of this study to determine if each was supported, rejected, or answered.

Hypotheses and Research Questions Findings

H1: When the sponsorship is perceived as “good,” those holding negative attitudes towards commercialization in sports will have higher resulting views of the sponsoring company or brand than those with a more positive attitude toward commercialization in sports, thus resulting in a contrast effect.

This was not found to be true. No contrast effects were found and the findings contradict that found in the Eagles studies. In fact, the exact opposite was found to be true. Context effects were found to be occurring and the previous held Att2Comm did have an effect on Att2Spon, but not

in the direction expected. It was found that those who come into a sponsorship scenario with a positive attitude towards sponsorship generally will leave with a more favorable opinion of the sponsor than will someone with a preexistent negative attitude, regardless of whether the sponsorship is “good” or “bad.” This finding supports balance theory, suggesting that a strong Att2Comm pulls Att2Spon as opposed to the other way around. Rather than challenge the conventional wisdom of sponsorship, it statistically supports it. Similar findings have been found by Mack (1999), Harvey (2001) and Meenaghan (1996).

H2: When the sponsorship is perceived as “bad,” those holding negative attitudes towards commercialization in sports will have lower resulting views of the sponsoring company or brand than those with a more positive attitude toward commercialization in sports.

Those with negative Att2Comm were found to have a lower Att2Sponsor than those with a positive Att2Comm when exposed to both “bad” and “good” forms of sponsorship. Thus, this particular hypothesis is supported and the null hypothesis can be rejected. However, with simply a context effect but not a contrast effect found in Att2Spon when a “good” sponsorship is used, the significance of this finding is weakened. Once again, simply a lower level of Att2Spon from someone with a low Att2Comm is to be expected and again reinforces conventional wisdom.

H3: A good “fit” between the sponsor and sponsored event will result in participants having a higher resulting attitude towards the sponsor than in the case of a poor fit.

This hypothesis was found to be true in certain two and three-way interactions illustrated by simple effects. Some significant “fit” effect was found in a two-way interaction on Att2Team and in a three-way interaction in Att2Sponsor. Not considering the Att2Comm of the individuals being exposed to the sponsorship, fit had a significant effect on Att2Team when a good sponsorship was used. We can take this to mean that when teams are looking for potential sponsors, getting a philanthropic sponsor that cares about the team and community is not enough. The way the team will be viewed because of the sponsorship depends on how good of fit there is between the sponsor and the team. It also suggests that, even if a team finds a great fit in a potential sponsor, if the sponsorship is not done well, the effect on the Att2Team will be the same as if a bad fit sponsor had been used. Teams must then look for a good sponsor that fits well with the team to enhance Att2Team in the eyes of the spectators.

When it comes to fit’s effect on the spectators’ Att2Spon, the combination of a good sponsor and good fit had a larger effect on those who had a negative Att2Comm than those with an incoming positive Att2Comm. Thus, even though those with a negative Att2Comm will have an overall lower Att2Spon, that attitude can be influenced more in a positive direction when a sponsorship is done well and there is a good fit between the sponsor and team.

While Fit may not have been the most influential independent variable on the dependent variables, it becomes clear that in certain situations, a good sponsorship can be greatly enhanced when it is done by a sponsor that has a good fit with the event. This should lead to teams and sponsors seriously considering the fit between them when considering a potential sponsorship deal.

OTHER FINDINGS

The most significant single factor in the three-way interaction was that of sponsorship type. Regardless of the type of fit or Att2Comm of the spectator, a participant's resulting Att2Spon will be increased when a sponsorship is done well. The key to this finding for potential sponsors is to understand what a "sponsorship done well" means and then implement those principles into their current and future sponsorships. General principles of a "Good" sponsorship included the sponsor caring more for the team and community than for their bottom-line profits. A good sponsor was one that was perceived as trying to support a good cause and not being in it "just for the money" (D'Astous & Bitz, 1995; Meenaghan, 1996). The best sponsors were seen as those that stayed in the background, not trying to turn the event into a commercial for their goods or services. Thus, it is not enough for a company to simply sponsor an event if it wishes to increase spectators' Att2Spon. The sponsorship must be done well to provide the desired benefits to the company.

In summary, while no contrast effects were found, it was evident that a clear distinction between good and bad sponsorships exists in the minds of spectators and that when a sponsorship is done well, the resulting attitude of spectator towards the sponsor and the sponsored team can be greatly enhanced. Also, even though spectators with negative Att2Comm have lower resulting Att2Spon and Att2team a good sponsorship can be improved in the eyes of the negative when a good fit exists between the sponsor and sponsored team.

CONCLUSION

Companies spend millions of dollars to have their names associated with various sporting events. Such a large financial investment is making company management concerned that these practices are efficient in promoting company goods and services in the eyes of the sports spectator. While a context effect on Att2Comm was not found among participants in this study, certain basic principles of effective sponsorship were reinforced and are thus useful for potential sponsors and sporting teams to consider. One principle for both sponsors and teams to consider is the need for a good fit in sponsorship. A good fit can greatly enhance the effects of a good sponsorship for both company and team, especially among those spectators who may be against sponsorship in the first place.

The primary principle that should be learned from this study is the need for a sponsor to approach the sponsorship in the right frame of mind. A desire for a quick buck in increasing bottom-line sales can lead to spectators having low attitudes towards the sponsoring company, seeing them as selfish and only interested in making money. However, a sponsor who is willing to put the needs of the sporting team and serving its community first can reap the long-term benefits of positive attitudes toward their company and brand from spectators of all opinions about sponsorship for years to come.

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IS PARIS BURNING? ANALYSIS OF 2004 INDECENCY COMPLAINTS ABOUT BROADCAST ADVERTISING DENIED BY THE FCC

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ABSTRACT

Amid record numbers of recent indecency complaints to the Federal Communications Commission (FCC), there is little information available on the complaints themselves, and no discussion of complaints focused on advertisements. This descriptive study analyzes a 1,030-page database of 254 denied indecency complaints from 2004 of which 35 addressed product advertisements and promotional spots. Analysis was done by type of media, geographical origin, complaint topic, and denial grounds. More than half of the complaints were denied as “not sufficiently graphic” (19), and about one-third for insufficient information (10). The authors discuss common elements of the complaints, and suggest reasons for these commonalities and areas for future research.

INTRODUCTION

At the FCC, we used to receive indecency complaints by the hundreds; now they come in the hundreds of thousands. Clearly, consumers—and particularly parents—are concerned and increasingly frustrated Martin (2005).

On February 1, 2004, entertainers Janet Jackson and Justin Timberlake flashed America into indecency watch overdrive during the Super Bowl halftime show. When Timberlake tore Jackson’s outfit to reveal her nipple, the moment became the most replayed in TiVo history (CNN.com, 2004). The FCC was deluged with an average of thirteen complaints per minute in the aftermath of the “wardrobe malfunction” (Shiver, 2005), totaling more than a half million complaints (Shannon, 2005).

The complaints about Jackson’s “wardrobe malfunction” were among more than 1,405,419 complaints logged by the FCC in 2004 from broadcast consumers upset about indecency on the airwaves. These complaints were about 314 programs, resulting in the issuance of twelve Notices of Apparent Liability amounting to \$7,928,000 (FCC, 2005c). The full extent of viewers’ outrage can be seen when the number of indecency complaints received in 2004 is compared to the number received in 2002 (13,922) and 2003 (166,683) (FCC, 2005c).

Perhaps the most graphic illustration of the public concern over indecency was demonstrated in the election-year-passage of the Broadcast Decency Enforcement Act of 2005, which President Bush signed into law on June 15, 2006 (Associated Press [AP], 2006). This legislation increases tenfold the maximum penalty the FCC can impose on a broadcaster for indecency, from \$32,500 per violation to \$325,000. The 1.1 million-member activist group, Parents Television Council (PTC), one of the most aggressive critics of broadcast indecency, praised Congress for listening to Americans “fed up with the sexually raunchy and gratuitously violent content that’s broadcast over the public airwaves (AP, 2006).

Judging from content on the PTC Web site, many Americans are equally upset about a perceived increase of highly suggestive, overt sexual and inappropriate content in broadcast advertising, and programming (Parents Television Council [PTC], 2005), culminating with the June 2005 Carl Jr.’s “Spicy Burger” ad featuring a scantily-clad Paris Hilton “lathering herself up and posing in a sexual manner” (PTC, 2005).

When word leaked that the ad was “too hot” for television and the PTC was protesting it, the server for a site hosting a 60-second version of the spot crashed from heavy traffic (Media Post, 2005). The PTC, which refers to itself as the “nation’s most influential advocacy organization protecting children against sex, violence and profanity in entertainment,” called the commercial “nothing but a sleazy attempt on Carl Jr.’s part to make money selling burgers with pornography” (PTC, 2005).

PTC did not file a complaint with the FCC because the content of the ad “does not appear to meet the legal standards for indecency as defined by the Congress and as interpreted by the FCC”; however, PTC was quick to say it was not discouraging the public from filing such a complaint (PTC, 2005). Indecency complaints for 2005 are not included in this study.

More recently, the PTC is focusing members’ attention on television commercials aired during sporting events, which they maintain contain violence and unsafe behavior (PTC, 2006). Tamburro, Gordon, Apolito, Howard (2004) cite a recent study showing that 14% of advertisements aired during sporting events displayed unsafe behavior and 6% depicted violence.

PTC is also pressuring advertisers not for the content of their commercials, but for the programming they sponsor. Tactics include listing the Ten Best and Ten Worst Advertisers on its Web site, and having PTC members appear at shareholders meetings for companies such as Clorox, Microsoft, Wal-Mart, and J.C. Penney to read a statement urging the company to drop ads on non-family-friendly shows (PTC, 2006).

PURPOSE OF THIS STUDY

The purpose of this descriptive study is to gain understanding about the number and the nature of indecency complaints about broadcast advertising that was denied by the FCC in 2004. The year 2004 is an excellent year for examination, not only because the Jackson/Timberlake Super Bowl incident resulted in almost a ten-fold increase in indecency complaints from the year before (FCC, 2005c), but also because in 2004 former FCC chair Michael Powell went to great lengths to punish indecency (Brown & Candeub, 2006).

Although the Federal Trade Commission (FTC) is the most widely empowered government agency regulating advertising, the FCC is responsible for prohibiting indecency, obscenity, fraud, and lotteries in radio and television advertising through its power to fine broadcasters and/or revoke or deny a broadcaster's license. It could be said that the FCC is empowered to act against the media carrying the advertising, while the FTC is empowered to act against the advertiser and/or the advertising agency.

LITERATURE REVIEW

This work is not the first examination of FCC complaints. Rivera-Sanchez (1997) examined 31 complaints against radio indecency between 1989 and 1995 and found that the FCC was consistent in the application of its rules against expletives, but less so regarding descriptions of sexual or excretory activities. Her conclusion was that it is difficult to predict with any degree of certainty how the FCC will rule on an indecency claim.

Rivera-Sanchez and Ballard (1998) then examined all indecency fines assessed by the FCC between 1987 and 1997 to determine how consistently the fines were applied. They found that between 1989 and 1992, fines of \$2,000 per incident were leveled in 14 cases; however, after 1992, the fines rose. They suggest that the very nature of indecent programs and their variations in theme, offensiveness, and explicitness require the FCC to be flexible, thus, accounting for at least some of the seeming arbitrariness in the fines.

While these two articles examine actual FCC indecency complaints and fines in a systematic way, other authors offer their perspectives on indecency regulation in the 21st century. Several focus on legislation introduced in the aftermath of the Super Bowl incident. Chidester (2004) describes legislative initiatives and suggests that the FCC must revamp its penalties so broadcasters do not simply regard fines as the cost of doing business. Reinhart (2005) examines some of this same legislation and, based on her analysis of current case law and First Amendment jurisprudence, determines that the proposed Clean Airwaves Act, which would punish eight specific profane words and phrases in any context, is unconstitutional. Timmer (2005) addresses the Broadcast Decency Enforcement Act, which would increase penalties for broadcasting obscene, indecent, or profane content to \$275,000 for the first violation (ten times the current maximum fine), with subsequent violations receiving higher fines. Timmer notes that an amendment to this bill extending penalties to cable and satellite providers would likely be found unconstitutional.

Calvert (2005) distills eight important lessons about free speech and public policy from the events of 2004, one of which is a concern that vocal minorities (such as the Parents Television Council) can skew public perception about how widespread indecency concerns are, giving disproportionate weight to its perspectives.

Several authors offer suggestions to the FCC and to Congress on how indecency should be regulated, including two former FCC chairs. Richard Wiley (1970 to 1977) suggests that the FCC should reestablish the importance of context in its determinations of indecency and should exercise appropriate restraint in findings of indecency (Wiley & Secrest, 2005). Reed Hundt (1993 to 1997) adds to the call for restraint, suggesting that the FCC's current crackdown on

indecenty threatens to enforce political restraints on free speech and restrict consumers' freedom of viewing/listening choice (Hundt, 2005).

Other authors suggest that the marketplace, not the government, should determine what programming is acceptable; rather than charging the FCC with determining what is indecent and what is not, it could be charged with requiring disclosure of advertising sponsorship for all programming, which would let consumers put pressure on advertisers to withdraw from objectionable programming (Brown & Candeub, 2006). Holohan (2005) proposes that technological advances have made current indecenty law obsolete and calls for the FCC's enforcement procedures to be revisited in light of current communications technology.

THE COMPLAINT PROCESS

The FCC does not act on its own to seek out indecent broadcasting, but relies on consumer complaints to launch investigations. The Enforcement Bureau was established in 1999 to handle consumer indecenty complaints (among other duties). In October 2005, the FCC revamped its broadcast indecenty Website to include a flowchart to show how complaints move through the process (FCC, 2005b).

According to this flowchart, when a consumer files a complaint, it is logged and its allegations analyzed. Additional information may be requested, and once all information is in, appropriate action is determined, either denying the complaint or issuing a Notice of Apparent Liability for Forfeiture to the offending media owner. Any decision can be petitioned for reconsideration. Any response is analyzed, and a final determination is made to either deny the complaint or issue a Forfeiture Order granting the complaint. Complainants may also petition for reconsideration of a denied complaint.

The Enforcement Bureau denied all of the complaints discussed in this paper. The record does not show whether a complainant requested reconsideration of the denial by the full FCC.

HOW THE FCC DETERMINES INDECENCY

Indecency in broadcasting is prohibited by Title 18 of the United States Code, Section 1464. This statute prohibits the utterance of "any obscene, indecent or profane language by means of radio communication" and permits both a fine and possible jail time.

In a 1978 case, *FCC v. Pacifica Foundation*, the Supreme Court of the United States upheld the application of Section 1464 during afternoon hours. The case concerned a radio monologue by comic George Carlin, which discusses seven profane words. The Court said that broadcasts need not be determined to be obscene to be regulated, and that the factors to be considered in regulating indecent broadcast speech include the time of day in which the speech was broadcast, the context in which the indecent speech occurs, and the likely audience for the speech. In accordance with that holding, the FCC mandates that indecent speech may be broadcast during "safe harbor" hours, 10:00 p.m. to 6:00 a.m., when children are less likely to be in the audience.

The FCC developed its own guidelines to determine what material qualifies as indecent. On its Web site, the FCC defines indecenty as "language or material that, in context, depicts or

describes, in terms patently offensive as measured by contemporary community broadcast standards for the broadcast medium, sexual or excretory organs or activities” (FCC, 2005d). The FCC also uses several other criteria, focused primarily on the context of the broadcast, to determine whether broadcast content qualifies as indecent.

In our assessment of whether material is “patently offensive,” context is critical. The FCC looks at three primary factors when analyzing broadcast material: (1) whether the description or depiction is explicit or graphic; (2) whether the material dwells on or repeats at length descriptions or depictions of sexual or excretory organs; and (3) whether the material appears to pander or is used to titillate or shock. No single factor is determinative. The FCC weighs and balances these factors because each case presents its own mix of these, and possibly other, factors (FCC, 2005a).

Thus, it is unlikely that a sexual situation occurring within the broadcast of a Shakespeare play would be deemed indecent, although a morning radio show’s description of sexual foreplay, intended to shock the audience (and perhaps increase the show’s market share), might well be considered indecent.

As noted above, the FCC exercises considerable discretion in determining whether a broadcast is indecent. For example, an expletive such as the “F-word” might be considered indecent, depending on the context. As seen below, the FCC appears unwilling to label programming indecent without an examination of the context in which the alleged indecency occurred, and many complaints were denied because complainants did not provide sufficient context for the FCC to make a determination of indecency.

METHOD

To determine what broadcast advertising generated consumer complaints to the FCC, the authors filed a Freedom of Information Act (FOIA) request with the FCC, requesting all denied complaints from 2004. Over one thousand pages of complaint information were received, including original complaints and the FCC’s responses, in electronic form. Of the 254 complaints in the FCC files, thirty-five addressed advertising.

The number examined is far smaller than the 1.4 million complaints received because most of those complaints were generated by activist groups (Media Week, 2004) and addressed the Super Bowl incident and other high-profile indecency cases where the FCC found the broadcaster liable. This database included all other denied complaints.

While the sample in the database is not large, it is important in that no such analysis of indecency complaints against advertising has been done before. The reason is that while the FCC makes such records available, few have been obtained and analyzed because of the enormous redaction cost incurred for eliminating the name and address of all complainants. The FCC made this database available to the authors at no cost because another party had already paid the redaction costs of approximately \$8,000.

ANALYSIS

All but one of the complaints analyzed were from individuals; the one exception came from the PTC, and was lodged against a radio station in Kansas City, Missouri (this complaint will be discussed later). None of the complaints were form letters; however, six were filed using an online form (the source of the form was not apparent in the record). A few were handwritten on lined tablet paper and the language reflected a person of limited literacy. Many of the complaints centered on concern and/or embarrassment when the cited ads were seen or heard by children.

The FCC's denial letter to every complainant included an information sheet that discussed the law with respect to indecent and obscene broadcasts and the FCC's enforcement procedures. The letters closed with a sentence encouraging complainants to convey their concerns directly to station management "because this can be an effective method to influence a station's programming decisions."

Table I provides a breakdown of the complaints analyzed for this paper. For purposes of this analysis, the authors considered complaints about promotional announcements for shows or contests to be advertisements.

TABLE I: SUMMARY OF COMPLAINTS RECEIVED BY THE FCC ALLEGING INDECENT ADVERTISING

Media forms	Complaint topics	Reasons for denial
Radio: 10	Advertisements for	During "safe harbor" hours: 3
Television: 25	products: 18	Insufficient information to determine indecency: 10
	Promotions: 17	Not sufficiently graphic/sustained: 19
		Other: 3
		- TV station demonstrated lack of inappropriate nudity
		- No actionable "broadcast" took place
		- No FCC authority over indecency in satellite radio

Of the 35 denied indecency complaints about advertising that were logged during 2004, 25 were for television and 10 were for radio. Of the television complaints, about half (12) were for promos of upcoming network shows. The complaints were almost evenly divided between ads and promos: 18 complaints were logged for ads, and 17 complaints for promos. Of the 18 ad complaints, 13 were for television and 5 were for radio. Of the 17 promos, 11 were for television and 6 were for radio.

ADVERTISING COMPLAINTS

Few complaints were for advertisements of nationally known products or services. As might be expected, many of the ad complaints were for sexual enhancement products (eight) or for the video series "Girls Gone Wild" (four). Four of the five radio ad complaints were for sexual enhancement products.

The eight ads for sexual enhancement products were evenly divided at four for television and four for radio. Several complainants pointed out that these ads were inappropriate for viewing or

listening outside “safe harbor” hours, particularly when they were included during newscasts or sporting events. One complainant pointed out that the radio ad for a sexual enhancement product, which discussed postponing of a climax and reliability dependent upon frequency of sex, aired at 2:00 p.m. when his/her 12-year-old daughter was in the car and was so embarrassed “she reached up and turned the station.”

Several mentioned specifically that teens were likely to be in the audience during sporting events. One complainant stated that “drug ads should be banned just as cigarette and liquor ads have been banned.” Two complainants quoted directly from radio ads, pointing out that one begins with the question, “How would you like to have better sex?” and the other with “Do you have trouble during sex postponing your climax?” These comments raise the question of whether sexual enhancement ads on radio tend to be more graphic than those on television.

The FCC denied most complaints for sexual enhancement products because of “in context not sufficiently graphic and/or sustained”; however, two complaints against radio ads were denied because of insufficient information.

Four complaints were received for television ads for the series “Girls Gone Wild,” which depicts young women supposedly on a spring break vacation. All complained of young women baring their breasts and pelvic areas. The FCC denied three of these because the broadcast was within the “safe harbor” period. One was denied because of “in context not sufficiently graphic and/or sustained,” pointing out that the visual images of breasts and pelvic areas were blurred by pixilation or similar technology. One denial letter included a paragraph referring to the limitations presented by the First Amendment and Section 326 of the Communications Act of 1934, which prohibits censorship.

A single complaint about the graphic nature of a television infomercial for the series “Celebrity Hotties” and “Celebrities Doing the Nasty” was denied as “in context not sufficiently graphic and/or sustained.”

The remaining six ads, five of which were for television and one for radio, were for various products or services. The complaint for radio stated that an ad for a local restaurant featured customers using the F-word, which was partially bleeped. The FCC denial letter pointed out that since the F-word was bleeped, material was “not sufficiently graphic and/or sustained.”

Of the five television ads, one for a nationally known furniture retailer was denied for insufficient information (nature of complaint was unclear). The complaint for a television commercial for brassieres, which featured “multiple images of near-naked breasts being pushed together to make cleavage” was denied as “not sufficiently graphic or explicit.” A complaint for an ad for a nationally known sandwich chain claimed the commercial depicted a man “suckling at the breast of a wolf.” The complaint was denied as “not sufficiently graphic and/or sustained.” A complaint against an insurance company commercial, which carried multiple signatures, alleged that the commercial showed a woman losing her bikini top while the camera focused on her breasts, and a neighbor who sees her loses control of a garden hose. The complaint states the ad is vulgar and inappropriate, degrades women, shows women as objects, is not family-friendly, and is harmful to children. The denial letter states the FCC is unable to determine whether the

material is actionable, as it was not alleged to be broadcast between 6:00 a.m. and 10:00 p.m. Finally, one complaint focused on an ad for a company identified only as “Serenity” with scantily clad women in sensual underwear which aired during “Wheel of Fortune.” This complaint was denied for insufficient information.

PROMOTIONAL ANNOUNCEMENTS

Of the six radio promos receiving complaints, three were against the same station for the same contest. An FM station in Pittsburgh ran a Valentine’s Day contest called “Guys Gone Wild,” wherein the prize was an expense-paid trip for two to a legal brothel in Nevada. One complaint included the copy for the promo taken from the radio’s Web site, stating that the site also contained a link to the brothel Web site. The complaint pointed out that not only was the promotion obscene, but was a solicitation for prostitution, which is illegal in Pennsylvania. A second complaint asked, “When are you going to put a stop to this nonsense?” and pointed out that the complainant was writing to the sponsors for the show where the promo aired advising them s/he “has no intention of patronizing them or buying their products until they separate themselves from such trash.” The six sponsors were listed at the end of the complaint letter. Two of the complainants were extremely upset that teens or children could go to the station’s Web site and click on the link to the brothel. All complaints were denied, citing “not sufficient graphic and/or sustaining.”

Another complaint for radio concerned non-broadcast jingles and ads in San Francisco promoting British subscription satellite radio station FCUK-FM. The writer is concerned about the type of jingles s/he knows the station will employ such as “FCUK on the beach,” “lucky FCUK,” and “too drunk to FCUK.” The complainant states that “subjecting children to this type of foul humor on the airwaves” is unacceptable. This complaint was denied because “with respect to subscription services, such as satellite digital audio service, the Federal Communications Commission’s regulation of objectionable programming is limited to obscenity and does not include indecency or profanity.” The denial also points out that regardless of the standard applied, “you do not appear to complain against any material aired by FCUK-FM, but for ‘comments you KNOW they will make,’” and without a complaint regarding material that has actually been aired, the FCC has no basis on which to take action.

The one complaint from the Parents Television Council was against a radio station in Kansas City, MO, about an incident aired at 7:30 a.m. when one of the station’s on-air personalities stood on the side of Shawnee Mission Parkway nearly nude, covered with 100 Powerball (lottery) tickets. His exploits were described to listeners, who were encouraged to go to the location and remove the tickets from the personality’s body. At the time the personality was arrested at 7:40 a.m., only 15 tickets remained. The FCC’s denial states the material broadcast, in context, “was not sufficiently graphic or explicit to render it patently offensive.”

The final radio promotion complaint was from the parent of a 14-year-old high school freshman who won a DVD of the R-rated Eminem movie “8 Mile” as a promotional prize. The parent complained that it should not be legal for radio stations to hand out DVDs to children who are not of age to see the movie, further noting that the radio station was “adding to the degradation of society” and the “debasement of females in our society” by promoting this movie. The FCC’s

denial stated that it had no authority to sanction the station for an act that was neither a “broadcast” nor an “utterance” under applicable law.

Before discussing the complaints received about television promos, it should be noted that a number of the complaints not only cited the nature of the indecency, but objected to the fact that shows that may not be appropriate for children were promoted during shows that were family-friendly, such as “Home Improvement,” “American Idol” and “Jeopardy.” One complainant specifically suggests that ad content should match the rating of the show in which it airs.

While undoubtedly many complainants will hail the FCC’s current push for cable and satellite operators to offer “family-friendly tiers” for subscribers, it remains to be seen whether this strategy addresses complaints of indecent promos aired during family-oriented programming.

Of the eleven complaints received about television promos, three were for the show *Coupling*. Only one complaint was specific, citing the promos showed couples in bed. Two of the complaints were denied for insufficient information and one was denied as “not sufficiently graphic and/or sustained.”

One complaint was received for the show “Elimidate,” stating that the ad showed a man in a hot tub with a woman sucking his nipple, and was viewed by his/her five-year-old granddaughter. The complaint was denied as “not sufficiently graphic and/or sustained.”

Three other complaints were also denied as “not sufficiently graphic and/or sustained.” One complained about a commercial for “Last Comic Standing,” which aired during the show “Home Improvement” at 4:00 p.m., wherein a comedian made a joke about his girlfriend having “crabs.” Another complained about a commercial for “King of Queens” which aired during a 7:55 p.m. airing of “Jeopardy” and showed two characters discussing having sex in the kitchen. A third complaint was lodged against “Oprah” for showing a topless woman to promote a show on plastic surgery. A complaint lodged against Fox concerned a promo for “WWE Smackdown,” where the complainant claimed one man pulled down the pants of another, displaying the man’s bare bottom. The FCC sent a Letter of Inquiry to Fox television stations, and Fox responded by disputing the allegation and providing a video CD of the promo. Upon review, the FCC found the man’s shirt was pulled off, not his pants, and no inappropriate nudity was displayed; therefore, the complaint was denied as “not sufficiently graphic.”

Three additional complaints regarding promos for television shows were denied for insufficient information. One complained about “Will & Grace” promos that showed two gay characters in bed together. Another complained about a promo for Fox News with inappropriate content for children, which aired during “American Idol.” The third complaint cited three promos: one for “Smallville” that showed a female sitting on a male in bed; one for “Everwood” where a father asks his son whether he is having sex; and one for “The Surreal Life” that showed nudity.

GEOGRAPHICAL DISTRIBUTION OF STATIONS RECEIVING COMPLAINTS

Intuitively, it could be suggested that stations in smaller or rural markets may receive more indecency complaints. That was not the case among the 35 complaints analyzed in this study (see Table II). Six complaints did not specify location of the station in question.

TABLE II: ADVERTISING COMPLAINTS BY CITY AND GEOGRAPHIC REGION

City	Geographic region	Number of complaints
Atlanta, GA	South	3
Baltimore, MD	South	1
Boston, MA	Northeast	2
Cheyenne, WY	Northwest	1
Chicago, IL	Midwest	4
Cleveland, OH	Midwest	1
Denver, CO	Southwest	1
Gulfport, MS	South	1
Harrisburg, PA	Northeast	1
Kansas City, KS	Midwest	1
Los Angeles, CA	West	1
Medford, OR	Northwest	1
Minneapolis, MN	Midwest	1
New Haven, CT	Northeast	1
New Orleans, LA	South	1
New York, NY	Northeast	2
Niagara Falls, NY	Northeast	1
Pittsburgh, PA	Northeast	3
San Francisco, CA	West	1
Youngstown, OH	Midwest	1
Unknown	--	6

Contrary to what might be expected, most of the complaints were from large metropolitan areas. The Northeast and Midwest had the most complaints, accounting for almost half the total. Thus, rather than seeing clusters in the South or in small or rural markets, we see the opposite trend.

DISCUSSION

As parents and others continue their efforts to “clean up” the public airwaves, it would seem broadcast advertising possesses unique characteristics which may attract attention even if complaints regarding indecent programming begin to diminish.

First, viewers and listeners have no control over the environment in which advertising appears. A parent may be viewing a “family-friendly” show with children present, or listening to a particular musical format judged to be free of what s/he considers indecent with a child in the car, when an ad or promo may appear which contains material the parent deems indecent.

Complainants in this study were particularly outraged when these ads appeared outside “safe harbor” times. For example, an ad for a sexual enhancement product aired on a mid-sized market television station during the national news and on a large-market television station during a baseball game. Another complaint cited a promo for a network show containing suggestive sexual content which aired on a large-market television station during a popular nationally syndicated quiz show before 8:00 p.m., and another which contained an off-color joke promoting a comedy show which aired during reruns of a family-friendly sitcom seen at 4:00 p.m. in a medium-sized market. It was as if consumers felt they were “blindsided” with what they considered indecent material during a show or time period they considered safe for children in the audience.

Secondly, the complaints for network show promos also suggest that broadcasters may be pulling particularly titillating footage from a show to include in the show’s promos, with the assumption that a racy promo would in turn attract a larger audience for a show. One complainant suggested that the rating for the show being promoted should be the same as the rating for the show in which the promo appeared.

Lastly, with advertisers today facing unprecedented challenges to attracting consumers’ attention, advertising messages are becoming edgier. As advertisers face technology that either eliminates commercials or allows viewers to skip over them, and continuing fragmentation of media audiences, the pressure is on to do whatever it takes to attract attention. The fact is that advertisers’ messages cost more than ever to place, yet reach a smaller than ever audience. For these reasons, advertisers are producing edgier ads in an effort to separate their message from the on-air clutter.

An example of such “edgy” advertising is the Paris Hilton ad for Carl Jr.’s discussed in the introduction. This ad attracted national news coverage and a pronouncement from the Parents Television Council stating, “This commercial is basically soft-core porn. It’s inappropriate for television” (James, 2005). Another example is the advertising for e-tailer Bluefly, which runs television ads with nudity and sexual content so racy most traditional broadcasters won’t carry them, apparently fearing a fine by the FCC (Colker, 2006).

While it is impossible to ascertain why advertising and promotions received such a small percentage of the denied complaints in the database (only 35 out of 254), there are several possible areas for consideration. Research suggests that sexual explicitness in advertising continues to increase (Reichert, Lambiase, Morgan, Carstarphen, & Zavoina, 1999). However, although the public might not ignore the phenomenon altogether, it might be so accustomed to sex as an integral part of advertising that it takes more than mere nudity or sexual innuendo to result in a complaint.

It should also be noted that many of the advertisements and promos targeted by complainants were not focused on the method of advertising (e.g., using sex to sell jeans) but rather on products themselves, such as sexy videos like “Girls Gone Wild,” sexual performance enhancement products, and radio promotions with a prize trip to a brothel. Again, it may be that advertising that uses sex to sell everyday products like food or clothing is so pervasive in print

media that it takes a product or service that consumers deem outrageous or unacceptable, coupled with a sexually suggestive ad, to result in a complaint filed with the FCC.

FUTURE RESEARCH

The authors' future research will consider several of the issues described above. An analysis of the entire database of 254 denied complaints received by the FCC in 2004 will place the advertising and promotions complaints in the larger context of all denied complaints. Additionally, the authors will monitor the progress of proposed legislation that will extend the provisions of the Broadcast Indecency Enforcement Act to cable and satellite broadcasts. The authors also intend to file another FOIA request with the FCC to obtain complaints from 2005 as a basis for comparison to those examined in this paper.

From FCC Chair Martin's recent remarks at the "Open Forum on Decency" noting that he shares public concerns about "coarse programming on television and radio today" and the implied threat that "something needs to be done," it appears that broadcast indecency concerns will remain high on the public and political agenda. This might be accompanied by additional research necessary to make sense of what the public deems intolerable and what the FCC will consider actionable in advertising and programming.

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METACOMMUNICATION AND INTERACTIVITY: A CONTENT ANALYSIS OF AUDIENCE FRAMING ON AN ADVOCACY GROUP'S BLOG

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ABSTRACT

This study adds to research on audience framing, metacommunication, and online textual and technical interactivity by examining a blog on a third-party, advocacy Web site. Results from a quantitative content analysis of blog posts indicate that audience frames follow patterns similar to journalistic ones. Overall, the majority of blog posts and frames present were negative in their tone. Diagnostic and Metacommunication frames were the most frequently employed. Additionally, the overall amount of metacommunication indicated that bloggers posted divisive, polarizing opinions about Puerto Rico's status and tended to blog about the blog itself and its users, instead of engaging in more detailed, deliberative discourse. Ultimately, the results of this article indicate the blog did not take advantage of textual or technical devices, which hindered chances for interactivity and mobilization.

INTRODUCTION

Since the end of the Spanish-American War, the United States has maintained control over the island of Puerto Rico. To this day, the inhabitants of this "commonwealth" exist in a sort of legal limbo, part American, and part Puerto Rican. To determine whether Puerto Ricans wish to maintain the status quo, become an independent nation, or integrate into the United States, plebiscites, or national referendums, have been held informally on the island several times over the past two decades. Although not recognized by the United States Congress, these polls do reflect the considerable amount of controversy and polarized condition of the Puerto Rican populace.

A task force report commissioned by former President Bill Clinton and completed during the presidency of George W. Bush in December 2005, recommended that the United States Congress mandate a plebiscite take place in Puerto Rico within a year. Because 2006 came to a close without resolution, this study explored how the Internet was being used to mobilize and inform citizens interested in this movement. To accomplish this, a Web site was selected. *Let Puerto Rico Decide* (www.letpuertoricodecide.com) serves as an information center and a community

for those interested in this movement, and works in conjunction with the Citizen's Educational Foundation, a non-profit organization based in Washington, D.C.

The purpose of this study was to determine the frequency and tone of blog posts, frames, and topics in the discourse on a third-party, advocacy Web site's blog. Additionally, textual and technical interactivity were assessed. While there is some ferment in the communication discipline on what, or what is not, a blog, this study considers a blog to be a section of a Web site that offers frequently updated content that is posted, and commented on, by users in reverse chronological order (Blood, 2002).

RELATED LITERATURE

FRAMING

The current study of the Let Puerto Rico Decide (LPRD) blog is guided by framing theory. Framing theory suggests that the media have the power not only to select what is covered, but also how items are covered. It is asserted that for the mass media, "To frame is to select some aspects of a perceived reality and make them more salient in a communicating text, in such a way as to promote a particular problem definition, causal interpretation, moral evaluation, and/or treatment recommendation for the item described" (Entman, 1993, p. 52).

Tankard (1997) suggests that, in mass media news content, framing is a process of selection, emphasis, exclusion, and elaboration influenced by the news organization. For the purpose of this study, the operational definition of a frame is a "central organizing idea or story line that provides meaning to an unfolding strip of events" (Gamson & Modigliani, 1987, p. 143).

Scholars argue that frames help organize reality for both journalists and news consumers (Shoemaker & Reese, 1996). Gitlin (1980) argues that media frames organize the world both for journalists who report it and for consumers who rely on their reports. As such, it is suggested that both audience and media frames need to be empirically analyzed (Scheufele, 1999).

Little research has focused audience frames, in comparison to media frames, and most of these studies have been qualitative (e.g., Neuman, Just, & Crigler, 1992; Gamson, 1992; Liebes & Katz, 1986). Only a couple of studies have examined audience frames using quantitative approaches (e.g., Rhee, 1997; Constantinescu & Tedesco, 2007).

Some researchers argue that frames are inherently valenced and can be categorized as being positive, neutral, or negative in tone, a theory supported using a scale in an experimental study of effects of news content (De Vreese & Boomgarden, 2003). This study found that frame valence did affect respondents' attitudes.

Additionally, results from multinational content analyses of international news events and elections support the finding that frames can be clearly classified by valence (Kaid, et al., 2005; Williams & Kaid, 2005). These studies indicate that journalists use differing tones as an intrinsic part of the reporting process.

This study aimed to advance framing literature by examining audience framing in the online environment. Its goal was to determine the extent to which blog posters' dialogue followed patterns of news media framing from prior research.

METACOMMUNICATION

Different labels have been used to discuss the concept of metacommunication. For example, media narcissism, self-reflexive reporting, meta coverage, and metacommunication are terms frequently used to describe how the media have shifted their focus more and more to their to themselves and their own conjecture about myriad issues and events.

The study of metacommunication has mostly emphasized the role that the media have begun to play in the political process. Instead of reporting the news of a political campaign, the media increasingly appear to behave more like a self-aware and participatory institution. This trend of mediated politics is an area of noted concern (Bennett & Entman, 2001; Graber, 1997; Mazzoleni & Shulz, 1999; Swanson & Mancini, 1996).

The Metacommunication frame is typically characterized in two ways: As the news media's self-referential actions and reflections on the nature of the strategies/processes between political public relations and political journalism (Esser & D'Angelo, 2002), and as self-reflexive coverage of the role of the media and the reporter in the process. It appears that the self-reflexive Metacommunication frame is a superficial, less meaningful type of news coverage. Alternatively, scholars argue about the effects of strategy/process metacommunication.

On the negative side, researchers suggest that strategy/process news is adversarial and is detrimental to the democratic process (Blumler, 1997; Kerbel, 1997, 1998). However, other scholars purport it to be beneficial and educational. They argue that this type of reporting serves to inform the electorate and enhance the democratic public sphere (D'Angelo, 1999; McNair, 2000).

Prior research has found high levels of metacommunication in international political campaign coverage (Esser & D'Angelo, 2006). Additionally, the self-reflexive Metacommunication frame was also found frequently employed in televised and Web content of the 2003 U.S. war with Iraq (Williams, 2006). Constantinescu and Tedesco (2007) found that the Romanian media employed self-reflexive and strategy/process Metacommunication frames in news Web sites' coverage about an international crisis.

Prior scholarship has typically examined the Metacommunication frame, and the practice of metacommunication, as a mass media issue. This study aimed to determine whether, and to what extent, the Metacommunication frame was prevalent in blog user's postings and not just a journalistic trend. It also extends this theoretical construct by applying it to a debate about legislation on an advocacy group's Web site.

TEXTUAL AND TECHNICAL INTERACTIVITY

Habermas (1962/1989) suggested the existence of a public sphere where many different types of individuals can converge to share in dialogue. Stromer-Galley (2002) argued that Internet users, who participate in online discourse, find an environment to talk that provides them with a sense of equality. Stromer-Galley's (2003) findings indicate that the Web offers much to the user in terms of content availability and dissemination of information.

Similarly, Foot and Schneider (2002) called this online public space the Web Sphere. They argue that the Internet fosters a Web sphere that offers political, cultural, and social information as well as expression of ideas from multiple sources (Foot & Schneider, 2003).

Prior Web site and blog scholarship indicates a relationship between the encouragement of active discourse, successful online mobilization efforts and interactive features. Earlier studies examined online political dialogue posted by users on Usenet and other public forums, such as Yahoo! groups (Stromer-Galley, 2002; Dahlberg, 2000).

Trammell et al. (2006) suggest that it is important to consider textual and technical elements of a blog to properly evaluate interactivity. Multi-media, online games, and features such as forwarding information via e-mail are considered examples of technical elements. However, a major feature the researchers argue is a vital form of interactivity on a blog is the presence of internal and external hyperlinks. The researchers suggest that the presence of hyperlinks on blogs provides a way for users to have the opportunity to experience the three types of interactivity that McMillan (2002) identified: user to-system, user-to-user, and user-to-document interactivity.

Dimitrova et al. (2003) argued that hyperlinking on a news Web site could be considered a form of gatekeeping, and that there are ways in which the strategic use of external hyperlinks could enhance the information provided on a Web site. However, the study found that online newspapers are not likely to link to external news sources and that online newspapers aren't utilizing the interactivity of the Web. The study argued that the lack of external hyperlinking is an indication of the gatekeeping power of online editors: "By choosing certain hyperlinks and ignoring others, online newspapers are more often than not keeping the gate to the vast information available on the Internet closed" (p. 412).

Similarly, in the 1996 campaign, Stromer-Galley (2000) found presidential candidate Web sites only linked to pages within their own respective sites. These instances of providing internal rather than external hyperlinks suggest producers of online content exercise the power of selecting certain sites, content, and interactive features to possibly further their own agendas. This practice, therefore, can be viewed as one that gives Internet content providers the power to perpetuate their worldviews while ignoring differing or alternate perspectives.

Conversely, Foot et al. (2003) analyzed the hyperlinking practices of U.S. Congressional candidates during the 2002 midterm campaign cycle. The researchers' findings were encouraging in that they found that these candidates frequently linked to external sites; therefore, they were taking advantage of the interactivity of the Web. In essence, these candidate's Web sites became portals to other sites and destinations of their own.

Researchers argue that in addition to providing hyperlinks for users, Web sites should afford users the ability to insert hyperlinks of their own, adding an element of user control. Peng, Tham, and Xiaoming (1999) argued that providing users with control of online content (e.g. hyperlinking) is a vital form of interactivity. Furthermore, in the context of a political campaign, Stromer-Galley and Foot (2002) found that allowing users some control over the content of the Web site, led to feelings of empowerment and connection between the Web site visitors and the political candidates.

Williams, et al. (2005) found that in the 2004 presidential election, candidates' use of interactive (e.g., providing numerous hyperlinks, allowing users to post comments, and providing ways for users to donate money and to mobilize) proved mandatory on the Bush and Kerry Web sites. They argued that providing interactivity for users was an essential element for mobilization.

Beyond the use of technical elements, researchers argue that Web sites can create a sense of interactivity by using textual features. For instance, Newhagen, Cordes, and Levy (1995) argued that textual engagement is a form of interactivity. For example, Web site users who encounter engaging content may consider their experience with the text as being interactive. Therefore, such interactivity could be considered a perceived form of interactivity. The news consumer or Web site visitor has a feeling of interactivity based on their engagement with the text.

Textual interactivity is argued to be as important as the technical features offered. For example, Trammell et al. (2006) also suggest that hyperlinks are an important interactive element for candidate blogs and that blogs were used as a personal way to talk to and, often, to send mobilization messages to the audience. The researchers argue that examining text-based interactivity (e.g., such as direct address to the audience, and explicit calls for action) and technical capabilities in online campaign communication can be useful, as candidates appear to use a variety of message appeal strategies on the Web in attempts to create an interactive environment that fosters mobilization.

Through early work in developing a coding scheme called "Videostyle," measuring tactics employed in political ads, Kaid and Davidson (1986) detailed a number of appeals used by candidates such as calling for change and inviting participation. Trammell et al. (2006) argue that, "Some of these strategies are interactive on two levels: the technical manner in which they are displayed and the spirit of the text. For example, the 'inviting participation' strategy is essentially a request for the reader to interact," (p. 27).

This study aimed to advance research about interactivity on a blog. It sought to examine the level of technical and textual interactivity provided.

RESEARCH QUESTIONS

The present research was designed to measure the prevalence and tone of frames and topics in blog posts. The study asked:

RQ1: What was the overall tone of the blog posts?

RQ2: What were the most prevalent frames in the blog posts?

RQ3: What was the tone of the frames in the blog posts?

RQ4: What were the most frequently mentioned topics in the blog posts?

RQ5: What was the tone of the topics in the blog posts?

RQ6: What was the level of interactivity in the blog posts?

METHOD

To answer these questions, a content analysis was performed on the Web site's main blog posts. In order to obtain data that were distributed equally over time, the researchers coded blog posts using a random systematic sample of blog posts over a six-month period ($N=113$). The study used a sampling interval of every tenth post, beginning, starting with the first entry on July 1, 2006 through December 31, 2006. Naturally, a blog post could contain more than one frame or topic. Therefore, frames and topics served as units of enumeration ($N=297$, $N=331$, respectively).

Each blog post was coded for overall tone: positive, negative, neutral. These were considered trichotomous variables, and each post was identified as being positive, negative, or neutral based on the overt, dominant characteristics of the discourse provided by the blog poster. For example, a post coded as positive would contain respectful dialogue, an optimistic outlook on topics, and congenial language. A negative post contained ad hominem attacks, a pessimistic outlook on an issue, and coarse language. A neutral blog post was operationally defined as having no clear tone or slant one way or the other. Neutral posts contained facts in a journalistic manner, without an overt show of bias or judgement.

The manifest content of the blog posts was analyzed deductively, and frames were coded as being either present or absent. These frames include the five generic news frames identified by Semetko and Valkenburg (2000): morality, economic consequences, conflict, human interest, and responsibility. In addition, numerous general and contextual topics specific to Puerto Rico, (e.g., legislation in Congress pertaining to Puerto Rico's status) and the three main options for the island's future (independence, statehood, or status quo) were also coded as present or absent. Furthermore, each frame and topic was evaluated as being positive, negative, or neutral in the blog posts. Moreover, the presence or absence of technical and textual interactivity was determined.

Two trained coders performed coding of the blog posts. Intercoder reliability was established at .92 across all categories, using Holsti's formula (North, Holsti, Zaninovich, & Zinnes, 1963).

RESULTS

Research questions sought to identify the frequency and tone of frames and topics identified in the blog posts. Research question 1 (RQ1) asked about the overall tone of the blog posts. Results indicate that the posts were nearly evenly split between negative and neutral tone, with 45% of the posts being overall negative, 43% neutral, and 12% positive.

The second research question (RQ2) asked what the most prevalent frames were in the blog posts. Eleven audience frames were identified in the debate over Puerto Rico's status. Table 1 lists the frames in order of frequency of occurrence in the blog posts.

Results for RQ2 indicate that the three most frequently occurring frames were diagnostic, metacommunication, and social identity. The diagnostic frame, which was identified by discussion of the reasons for and effects of Puerto Rico's status, was found 82 times, accounting for 28% of identified frames. The metacommunication frame identified when bloggers wrote in a self-reflexive manner about their reasons for contributing to the discussion, their role as a blogger, about other bloggers, or about the blog in general. It occurred 77 times, making up 26% of all identified frames. Third, the social identity frame involving discussion of whether from a cultural standpoint the residents of the island were more Puerto Rican, American, neither, or both, and was found 44 times, accounting for 15% of all frames.

Occurring with moderate frequency were the political consequences, conflict, economic consequences, and prognostic frames. The political consequences frame was used when bloggers discussed the implications of a change in Puerto Rico's status on public affairs and issues of governance. This was present 24 times, accounting for 8% of all frames. The conflict frame, found 20 times and making up 7% of the frames, was characterized by a focus on the opposition faced by the opposing sides. The economic consequences and prognostic frames both occurred 19 times, each accounting for 6% of the total frames. The economic consequences frame dealt with the financial effects Puerto Ricans would face with a change in status, particularly with regard to changes in taxation. The prognostic frame typically included the blogger's expectations for when and how the issue of a change in status would ever be addressed.

The human interest, morality, responsibility, and game frames occurred very infrequently, each accounting for 1% of identified frames. The human interest frame was identified by the presence of personal, emotional and anecdotal evidence as part of a blog post. The morality frame consisted of discussion of whether Puerto Ricans were being treated fairly or lawfully. When the responsibility frame was found, it included information about who was to blame and who needed to act to remedy the situation. Finally, the game frame was characterized by discussion of which status option was gaining or losing momentum.

The third research question (RQ3) sought to determine the tone of the frames in the blog posts. Table 1 shows the frequency with which each frame was found in a neutral, negative, or positive blog post. Chi-square analyses were run to determine whether there were statistically significant differences in the tone of the frames in the blog posts.

Results for RQ3 show that the diagnostic frame occurred most frequently in posts with a negative tone (44%), followed by positive (43%), and neutral (13%), a statistically significant finding, chi-square at 14.659; $df=2$; $p<.001$. The metacommunication frame was most often in negatively valenced posts (55%), then positive (35%), and neutral (10%), chi-square at 22.623; $df=2$; $p<.001$. The social identity frame was found in posts with a negative tone half of the time (50%), followed by positive (39%) and neutral (11%), a significant finding, chi-square at 10.409; $df=2$; $p<.001$.

Interestingly, the political consequences frame was generally presented in a positive context (63%), more often than negative (29%), or neutral (8%), chi-square at 10.75; $df=2$; $p<.005$. Unsurprisingly, the conflict frame was largely in negative blog posts (70%), then neutral (30%), chi-square at 14.8; $df=2$; $p<.001$. The economic consequences frame was evenly split between

positive and negative valence (42% each), while the prognostic frame was most often found with a positive valence (47%).

The human interest frame was evenly split between posts with a negative or neutral tone. The morality and responsibility frames were each found 3 times, once in a neutral post, and twice in negative posts. The game frame was always found in a negative blog post (100%). Since these frames were found very infrequently, little inference can be drawn from this data.

TABLE 1: FRAME PREVALENCE AND TONE IN BLOG POSTS

Frames	Prevalence		Neutral		Negative		Positive	
Diagnostic***	82	(28%)	11	(13%)	36	(44%)	35	(43%)
Metacommunication***	77	(26%)	8	(10%)	42	(55%)	27	(35%)
Social identity***	44	(15%)	5	(11%)	22	(50%)	17	(39%)
Political consequences**	24	(8%)	2	(8%)	7	(29%)	15	(63%)
Conflict***	20	(7%)	6	(30%)	14	(70%)	0	(0%)
Economic consequences	19	(6%)	3	(16%)	8	(42%)	8	(42%)
Prognostic	19	(6%)	4	(21%)	6	(32%)	9	(47%)
Human interest	4	(1%)	2	(50%)	2	(50%)	0	(0%)
Morality	3	(1%)	1	(33%)	2	(67%)	0	(0%)
Responsibility	3	(1%)	1	(33%)	2	(67%)	0	(0%)
Game	2	(1%)	0	(0%)	2	(100%)	0	(0%)
Total	297	(100%)	43	(15%)	143	(48%)	111	(37%)

Note: $N = 297$. Percentages are of all frames present in the blog posts. *** Difference between frame tone is significant, $p < .001$. ** Difference between frame tone is significant, $p < .05$.

Research question 4 (RQ4) asked what the most frequently occurring topics were in the blog posts. Table 2 lists the topics in order of frequency. The two topics that occurred most frequently were “becoming 51st state” and “becoming independent.” These represent two of the potential outcomes for Puerto Rico’s status, the other being “maintaining status quo.” Occurring with moderate frequency were the issues of “American politics,” the LPRD social movement in general, and the economy. Some of the major issues which seem to be at the heart of the debate, including representation, dissatisfaction with status, and nationalism, occur (as with most of the issues) fewer than 20 times in the blog posts.

Research question 5 (RQ5) concerned the tone of the topics. Table 2 provides a breakdown of the relationship between topic mention and overall blog post tone. Chi-square analyses were run to determine whether there were statistically significant differences in the tone of the topics in the blog posts.

The two major solutions to Puerto Rico’s status frequently discussed in the blog posts were presented primarily in neutral and negative ways. The topic of “becoming the 51st state” was found nearly as often in neutral and negative posts (45% and 40%, respectively), followed by positive (15%), chi-square at 9.631; $df=2$; $p < .01$. Becoming independent was mostly found in negative and neutral posts (45% and 39%, respectively), followed by positive posts (16%), chi-square at 6.653; $df=2$; $p < .05$.

Discussion of American politics was largely included in negative posts, (53%), followed by neutral (28%) and positive (19%), chi-square at 6.063; $df=2$; $p < .05$. Discussion of the LPRD social movement in general was most often in negative posts (56%), then neutral (37%), and positive (7%), chi-square at 9.566 $df=2$; $p < .01$. The difference between overall blog post tone and discussion of the economy was not significant, chi-square at 5.429; $df=2$; $p < .066$.

TABLE 2: TOPIC PREVALENCE AND TONE IN BLOG POSTS

Topics	Prevalance	Neutral	Negative	Positive
Becoming 51st State*	65 (20%)	29 (45%)	26 (40%)	10 (15%)
Becoming Independent**	49 (15%)	19 (39%)	22 (45%)	8 (16%)
American Politics**	32 (10%)	9 (28%)	17 (53%)	6 (19%)
LPRD Social Movement*	27 (8%)	10 (37%)	15 (56%)	2 (7%)
Economy*	22 (7%)	9 (41%)	10 (46%)	2 (9%)
Nationalism	19 (6%)	7 (37%)	7 (37%)	5 (26%)
Votes about Status	16 (5%)	7 (44%)	7 (44%)	2 (13%)
Education	11 (3%)	4 (36%)	5 (46%)	2 (18%)
Dissatisfaction with Status	11 (3%)	3 (27%)	5 (46%)	3 (27%)
War in Iraq	10 (3%)	2 (20%)	7 (70%)	1 (10%)
International Issues	10 (3%)	5 (50%)	5 (50%)	0 (0%)
Patriotism	9 (3%)	2 (22%)	5 (56%)	2 (22%)
Representation	8 (2%)	2 (25%)	6 (75%)	0 (0%)
Taxes	8 (2%)	2 (25%)	5 (63%)	1 (13%)
LPRD Web site	6 (2%)	3 (50%)	3 (50%)	0 (0%)
Crime	4 (1%)	2 (50%)	2 (50%)	0 (0%)
Healthcare	4 (1%)	3 (75%)	1 (25%)	0 (0%)
Legislation in Congress	4 (1%)	0 (0%)	2 (50%)	2 (50%)
Satisfaction with Status	4 (1%)	1 (25%)	2 (50%)	1 (25%)
Poverty/Welfare	3 (1%)	2 (67%)	1 (34%)	0 (0%)
Bureaucracy	2 (1%)	1 (50%)	1 (50%)	0 (0%)
Maintaining Status Quo	2 (1%)	1 (50%)	1 (50%)	0 (0%)
Recent News	2 (1%)	1 (50%)	1 (50%)	0 (0%)
Defense	1 (1%)	1 (100%)	0 (0%)	0 (0%)
Immigration	1 (1%)	1 (100%)	0 (0%)	0 (0%)
Terrorism	1 (1%)	1 (100%)	0 (0%)	0 (0%)
Total	331 (100%)	127 (38%)	156 (47%)	48 (15%)

Note: $N = 331$. Percentages are of all topics present in the blog posts. ** Difference between Frame Tone is significant, $p < .05$. * Difference between Frame Tone is significant, $p < .10$.

Research Question 6 (RQ6) sought to identify whether the blog was used to call its readers to action. To code for this, the researchers looked for explicit textual statements that asked other blog posters or readers to perform an action.

Fifteen percent of the blog posts contained at least one of these statements. Most of these “calls” were written like commands or directives, with strong language. Blog users commanded each other to “tell the truth,” “stop using scare tactics,” and “state where you stand.” On four occasions, blog posters invited others to become more informed by reading additional materials.

Two of these posts contained the Web addresses where further information could be found. The Web site's lack of technical features prevented these from becoming interactive hyperlinks. Results for RQ6 indicate that blog posters were infrequently using the blog to call each other to action.

DISCUSSION

This study examined the discourse on a blog on an advocacy group's Web site, and found high levels of metacommunication and negativity, and little interactivity. The Web site that contained the blog remained unchanged for weeks at a time, while the blog received multiple entries each day from one of two-dozen bloggers.

BLOG POST TONE

Results for RQ1 indicate that the overall tone of the blogs posts was largely negative or neutral, with only 12% being framed positively. It is important to note how the blogger's posts are similar to the problem identified of negative mass media political coverage. The issue of polarization and hostility in general is an interesting finding that is similar to the concerns about "shout TV."

FRAME PREVALENCE

The results about frame prevalence revealed some interesting findings. For example, the metacommunication frame was the second-most dominant frame identified. Perhaps because of the innate interactive and at times informal nature of blogs, people feel compelled to directly address other users when providing feedback. Also interesting was the negligible frequency of some of the other frames. Bloggers did not often write about who was to blame for the current situation (responsibility frame), or even what they anticipated would happen (prognostic frame). Instead, they seemed focused on defining the problem at hand from a macro level (diagnostic and social identity frames) than on a personal, micro level (human interest frame).

FRAME TONE

Results for RQ3 were that the frames used by the blog users were mostly in negative blog posts, in keeping with the general finding regarding negativity of blog posts. As one would expect, the conflict frame was most often negative, 70% of the time. Not all frames were negative, however. The political consequences frame was only negative 29% of the time. Interestingly, bloggers seemed to focus on the positive political outcomes of whichever status option they favored.

The metacommunication frame occurred in negative posts 55% of the time. Many of the blog posts included strong attacks against the arguments and the character of fellow bloggers. This negatively valenced use of the metacommunication frame often consisted of personal insults.

Users typically chose a letter of the alphabet or short nickname to "sign" their posts. For example, Xavi (2005) wrote: "Blah blah blah, the same debates, the same comments, the same blah blah blah." Typical of the tone of many of the posts, another blogger, FCL (2005), clashed with N about an argument made previously: "Wow, I get of[f] the blog for a couple of days and

N has a field day with me. I would expect comments like that from somebody as neanderthalistic as N, I never said to relegate Spanish to street language, anyways everybody else can read, unlike you.”

A comment from a newcomer to the blog used the metacommunication frame to share his comments: “First of all, let me say that I do not enter this blog claiming to be an expert or overly familiar with the status issue. Perhaps that will only make a discussion with those of you who are more knowledgeable about the subject all the more valuable. Having said that, please allow me to respectfully pose one question to any blogger participating in this discussion who would like to respond” (S, 2005).

TOPIC PREVALENCE

RQ4 aimed to identify the most prevalent topics discussed on the blog. Blog posts most frequently focused on two of the potential outcomes for Puerto Rico’s status. These were often short posts with a blogger stating his or her position vehemently with little regard for deliberation. This is a particularly discouraging finding given the potential the Internet affords citizens to become informed, share ideas, and mobilize each other.

TOPIC TONE

The tone of the topics was the focus of RQ5. Since many of the topics occurred very infrequently, it is hard to draw conclusions about their tone. The negative tone of “American politics” and the “LPRD social movement” may point to a strong sense of futility and despair concerning Puerto Rico ever actually being able to decide its future. The people using this blog took the opportunity to vent their frustrations with the system and to attack the positions of others.

INTERACTIVITY

In assessing the level of technical and textual interactivity, a surprising finding was that there was practically a complete lack of the use of any technical features on the blog. In addition to no multi-media, graphics, or other elements, there was almost a complete lack of the use of hyperlinks. While there was a higher level of textual activity at 15% in which blog posts contained explicit calls to action for the user, the amount was low. Results for RQ6 indicate that users were not offered technical features nor did they use the text to call each other to action.

THEORETICAL CONTRIBUTIONS

There are several noteworthy implications that this study provides that are important for scholars of framing theory, metacommunication, interactivity, and blogs. This study advances framing theory by assessing the frequency of audience frames on a blog. Audience frames were found to follow similar patterns to media frames, with high levels of negativity and metacommunication. In the absence of technical interactivity, audience frames on blogs may become more negative and self-reflexive.

Some scholars have criticized traditional news media for the way it frames news stories as polarizing and self-reflexive. For example, using “talking heads” pundits espouse vitriolic and partisan rhetoric with little time given to substantive discussion of the issues (Nimmo & Combs, 1992). The Internet brought hope of a participatory revolution, whereby anyone with access to a computer could join in the discussion of political issues, thus bringing more voices and greater perspective on the issues.

What this study found, however, is that the dialogue found on blogs may be just as partisan and lacking in substantive thought as that delivered by traditional media. Furthermore, this research indicates that one of the most frequent ways in which Internet users communicate with each other is through metacommunication.

IMPLICATIONS

The Internet can be used to create and foster a sense of community and engagement among its users. Results of this study suggest that international not-for-profits organizations, businesses, and political entities seeking to harness the power of the Internet, can benefit by providing interactive elements on their Web sites and blogs. Doing so can foster excitement and enhance relationships. However, simply including a blog on a Web site can be not an effective use of the technology. Blog users can be mean-spirited and drive away potential contributors to the Web site. The tone and quality of the discussion on this blog may have benefited from greater oversight by the Web site’s creators. There may be a need to provide interactivity through guided discussion and the use of hyperlinks. Perhaps instead of attacks and rebuttals, a more interactive forum would foster a greater exchange of ideas. An official representative of the movement, company/organization, or individual should present themselves to the Web site users and work to set the agenda and tone of the discussion.

LIMITATIONS

As with all research, there are limitations. This study is no exception. It focused on one Web site over a six-month period. While the size of the sample was small, the blog posts were representative of the blog because of the random sampling procedure. This Web site was rarely updated and there seemed to be no interaction between the content on the Web site and the blog posts. Therefore, this study was unable to analyze more technical and interactive features that have been found to help guide and motivate discussion. Finally, some of the frames and topics occurred too infrequently to infer about their tone. However, the absence of such topics and frames points to a larger issue of concern: People may be using the Internet not to share and disseminate information, but to broadly state their stance on an issue and attack the viewpoints of others.

FUTURE RESEARCH

There are strong opportunities for future research in this area. Scholars should look to compare these findings with other, more interactive Web sites employed by advocacy groups and other organizations. Likewise, the types of frames used in discourse on Web sites that host video blogs (vlogs) and social networking Web sites (e.g., Facebook, MySpace) should be analyzed. Among the questions this study raises are, “How would bloggers frame discussions on a more interactive

Web site?” “Does interactivity change the tone of audience frames and quality of discourse?” and, “Is the prevalence of the Metacommunication frame affected by the presence of interactivity?”

CONCLUSION

The Internet offers numerous ways for people to become engaged and invested in social issues and organizations. A well-run blog has the potential to affect people’s cognitive, affective, and behavioral inclinations. This study points to the need for blog creators to consider how the amount of control and level of interactivity they afford their users may affect the tone and type of discourse found on that blog.

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THE CONSUMER'S TIME ORIENTATION AND ITS EFFECT ON THE EVALUATION OF E-TAILER OFFERS

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ABSTRACT

The emergence of the Internet as an information search and product comparison tool for consumers has led to a reduction in time-related search costs. The Internet minimizes search and transaction costs by eliminating time-related issues, such as visiting different retail locations and waiting for service. However, there is often a trade-off regarding the delivery of the product to the customer. This paper examines the relationship between a consumer's time orientation and the perceived appeal of e-tailer offerings. The results of our study and the implications for future research are discussed.

INTRODUCTION

The "time is money" adage attributed to Benjamin Franklin highlights an important cultural value in the United States and other nations. Indeed, the concept of time as an opportunity cost has been researched extensively within the field of economics (cf. Becker, 1965). For instance, the economist Ian Walker developed a simple mathematical formula to calculate the monetary value of time that takes into consideration a worker's hourly wage, tax rate, and cost of living. By assigning it an economic value, time can be seen as a cost to be minimized or as an asset to be prolonged (Jacoby, Szybillo, & Berning, 1976). This helps explain why consumers are willing to pay for timesaving goods and services, yet expend considerable time on shopping sprees.

The purpose of this study is to examine the consumers' evaluation of time-related service attributes relating to an on-line purchase. More specifically, it looks at the perceived benefits or costs of delivery time, financing options, and rebate redemption time associated with the stated on-line offer. It compares responses from individuals with different time orientations, namely present-time-oriented, future-time-oriented, and time-pressed individuals (Amyx & Mowen, 1995; Rojas-Méndez, Davies, Omer, Chetthamrongchai, & Madran, 2002). This paper contributes to the existing literature by considering the relationship between various service activities and the consumer's time orientation, within the framework of an on-line purchasing situation.

CONCEPTUAL FRAMEWORK

THE ECONOMIC VALUE OF TIME:

Within economics, a considerable emphasis has been placed on prescribing a monetary value to the concept of time (Becker, 1965). An employee's hourly wage rate is often used as a proxy for the individual's opportunity cost (Okada & Hoch, 2004). This simple formula, or the inclusion of other economic variables, such as tax rates and the cost of living, can help determine the monetary value of daily activities, such as household chores. This household production is assumed to increase the economic well being of the housing unit, enabling consumers to purchase more goods and services as opposed to paying someone else to do the housework. Other types of time-related activities are viewed as opportunity costs that increase the perceived cost of a product. Nichols, Smolensky, and Tideman (1971) considered the lost cost of waiting in a line and suggested that the relative cost of the good or service being purchased increased as one spent longer waiting to purchase the good. At the same time, the perceived cost of waiting in line is assumed to vary from person to person. Other researchers have focused on the apparent underappreciation of the value of time (Thaler, 1980). For instance, a high wage earner might take the time to mow his or her own lawn as opposed to paying someone else to do the job for a lower wage. This suggests that the opportunity cost of time is ambiguous and can vary within and among individuals (Okada & Hoch, 2004).

THE ROLE OF TIME IN CONSUMER RESEARCH

Within the discipline of marketing, several studies have focused on aspects of time relating to consumer decision making and purchasing behaviors. For instance, Taylor (1994) examined the effect that waiting has on a customer's evaluation of a service. Taylor considered the impact that waiting for service has on the customer's affective responses (anger and uncertainty) and evaluation of the service. Her study considered not only the length of the delay, but also the consumer's attribution for the delay (e.g., Was the cause of the delay something within the service provider's control?) and the degree to which the consumer was able to fill time (e.g., reading a magazine or chatting with a friend). Marmorstein, Grewal and Fishe (1992) considered not only the economic cost of the amount of time spent shopping, but also the perceived enjoyment of the shopping experience. In their study on coupon usage, Babakus, Tat and Cunningham (1988) considered the various time costs associated with searching for, organizing, and redeeming coupons. Their results suggest that the consumer's perceived value of time has a negative relationship with coupon usage.

Within consumer behavior, time has been operationalized as a social (Gurvitch, 1964), multidimensional (Hirschman, 1987; Rojas-Méndez et al., 2002), and subjective (Okada & Hoch, 2004) construct. Researchers have focused on the consumer's disposition towards time, identifying various measures, including time orientation (past, present, future), time pressure, and planning (cf. Rojas-Méndez et al., 2002). Time orientation has in particular received considerable attention. For instance, Gross and Sheth (1989) found that time-oriented advertising appeals had become more predominant within the United States over the last century, reflecting the growing importance and scarcity of time within a modern, Western society.

Time orientation is assumed to differ not only between cultures, but also between individuals

(Amyx & Mowen, 1995). Individuals are seen as future-time-oriented, present-time-oriented, or time-pressed. A future-time orientation can be defined as a “tendency to plan ahead and look at the long term when making consumer decisions” (Amyx & Mowen, 1995, p. 248). Future-time-oriented individuals tend to delay immediate gratification to achieve long-range outcomes that are more favorable. At the same time, they are more likely to advance costs if they perceive it to be in their best interest over the long term. A present-time orientation is defined as a “tendency to not plan ahead and look to the short term or immediate time period when making consumer decisions” (Amyx & Mowen, 1995, p. 248). In this instance, present time-oriented individuals are more willing to focus on immediate gratification by advancing gains and delaying costs. Time pressure is based on the economic viewpoint of time being something of value, a scarce resource that is constantly ticking away (Rojas-Méndez et al., 2002). From a psychological perspective, individuals who feel pressed for time are likely to reallocate activities, rushing certain tasks to make room for others or to increase discretionary time (Rojas-Méndez et al., 2002; Jacoby et al., 1976).

TIME AND ON-LINE PURCHASE PREFERENCES

The emergence of the Internet as an information search and product comparison tool for consumers has led to a reduction in time-related search costs (Wu, Ray, Geng, & Whinston, 2004). The Internet minimizes search and transaction costs by eliminating time-related issues, such as visiting different retail locations, waiting for service, and so on (Athiyaman, 2002). At the same time, there is often a time-related cost relating to the delivery of the product to the customer. Whereas in a brick-and-mortar store the consumer can purchase the product and leave with it in-hand, the on-line customer is more often than not purchasing in advance and then waiting for the product to be delivered by mail. Therefore, the on-line shopper must balance the time saved in searching for information and comparing prices with the time added in waiting for delivery of the product. Indeed, Wu et al. (2004) examined the implications of the “free riding” phenomenon in e-commerce, whereby a consumer uses Internet information services to collect and compare information on various brands and then visits a brick-and-mortar store to make the purchase. In order to diminish free riding tendencies, information search engines, such as cnet.com will not only help inform the consumer about the best brand available, they will also direct them to on-line sites with the lowest prices for the specific brand. In addition, e-tailers companies provide greater flexibility in lead delivery lead-time, whereby consumers can pay higher shipping and handling fees in return for faster delivery service.

AN EXPLORATORY FRAMEWORK EXAMINING TIME ORIENTATION AND ON-LINE PURCHASE BEHAVIOR

The above discussion suggests that time as an opportunity cost is an ambiguous construct that varies among individuals. In addition, researchers have identified various dimensions of time orientation, including future orientation, present orientation, and time pressure. Studies focusing on e-commerce suggest that time is an important variable within the consumer decision making process. To date, however, the authors are unaware of any study that has examined the role of time orientation in the consumer’s comparison of e-tailer offers. These offers can be viewed as time-related (e.g., delivery time, mail-in rebates, financing options), quality-related (e.g., e-tailer reputation, customer service, technical support), and price-related (e.g., list price, discount). The purpose of this study is to provide an exploratory analysis of the potential relationships between

the consumer's time orientation (present, future, time pressure) and the three types of categories (time, quality, price) that are used to make comparisons between various e-tailers. Whereas we expect that a consumer's time orientation will have a significant impact on the perceived importance of time-related variables, we are also interested in seeing whether it has an additional impact on the perceived importance of quality and price-related offers. Given the exploratory nature of this study, no *a priori* hypotheses are developed.

METHOD

One hundred ninety students recruited from an American university participated in this study. The mean age of the participants was 26, and 65.8 % were female. The median annual income was in the \$40,000 to \$59,999 range.

The respondents were given a scenario involving the purchase of a desktop computer. They were told to assume that they had already decided to purchase a specific brand and model, yet the model was available from various e-tailers. Furthermore, they had decided to go on-line and select an e-tailer from whom to make the purchase. They were given information on a technology web search engine that lists the various e-tailers that have a variety of desktop computers for sale and were told that this website compares the e-tailers based on the price (list price, instant rebates), quality (e-tailer reputation, customer service, technical support), and time (delivery time, rebates redeemable through the mail, financing options). Subjects were asked to evaluate the importance of each of these e-tailer attributes when purchasing a desktop computer on-line. Each variable was measured on a seven-point scale, with 1 being "not at all important," 4 being "somewhat important" and 7 being "very important."

Future orientation, present orientation, and time pressure constructs were measured using seven-point Likert type scales developed by Rojas-Méndez et al. (2002). Future orientation was measured using three items: (a) I like to think about what I am going to do in the future; (b) I have control over my future; (c) I have been thinking a lot recently about what I am going to do in the future. The Cronbach's alpha reliability coefficient for this scale was 0.75. Present orientation was measured using four items: (a) I like things that happen unplanned; (b) I live for today; (c) I always seem to be doing things at the last moment; (d) I am mostly concerned about how I feel now (in the present). The Cronbach's alpha reliability coefficient was 0.71. Finally, time pressure was measured using four items: (a) I am always in a rush; (b) Time is precious; (c) I am constantly looking at my watch; (d) I am always looking for ways of saving time. Cronbach's alpha reliability coefficient for this scale was 0.75. In each case, the reliability coefficients exceed the threshold recommended level of 0.70 for established scales (Nunnally, 1978). An average index score ranging from 1 to 7 was computed for each subject for each of the three scales.

RESULTS

Descriptive statistics for the dependent variables are presented in Table 1. A cursory view of mean scores suggests that price-related variables are considered the most important criteria for selecting an e-tailer, closely followed by quality-related variables and then time-related variables. Technical support was considered the most important variable overall, with a mean score of 6.16 out of 7. Among the time-related variables, delivery time was considered the most

important ($x = 5.90$). Overall, mail-in rebates were considered the least important variable across all three categories, with a mean score of 4.83 out of 7.

TABLE 1. DESCRIPTIVE STATISTICS

Category	Variable	N	Min.	Max.	Mean	S.D.
Time-related variables	Mail-in rebates	187	1	7	4.83	1.620
	Interest free financing	188	1	7	5.71	1.629
	Delivery time	187	1	7	5.90	1.241
Quality-related variables	E-tailer reputation	189	1	7	5.76	1.255
	Customer service	189	2	7	5.98	1.257
	Technical Support	189	2	7	6.16	1.176
Price-related variables	List price	189	1	7	6.06	1.291
	Instant discount	188	1	7	6.01	1.142

Correlation coefficients between the three time-related measures and the various attributes are shown in Table 2. The results suggest that time pressure is positively correlated with the perceived importance of the e-tailer's quality variables (reputation, customer service, technical support) and certain time-related variables (rebates through the mail, delivery time). There is no relationship between time pressure and price or interest free financing. Present orientation is not correlated significantly with any of the variables. Finally, future orientation is correlated with not only two of the time-related variables (interest free financing, delivery time), but also with all the quality variables (e-tailer reputation, customer service, technical support) and the price-related variables (list price and instant discount).

TABLE 2. PEARSON CORRELATIONS BETWEEN TIME ORIENTATION AND E-TAILER ATTRIBUTES

E-tailer Attribute Dimensions	Variable	Time Pressure	Present Orientation	Future Orientation
Time-related variables	Delivery time	.228(**)	.133	.196(**)
	Mail-in rebates	.198(**)	.143	.110
	Interest free financing	-.025	.118	.168(*)
Quality-related variables	E-tailer reputation	.136	-.016	.260(**)
	Customer service	.156(*)	-.038	.214(**)
	Technical Support	.205(**)	-.071	.225(**)
Price-related variables	List price	.088	.061	.199(**)
	Instant discount	.135	-.056	.196(**)

Note: * Correlation is significant at the 0.05 level. ** Correlation is significant at the 0.01 level.

TIME ORIENTATION AND TIME-RELATED VARIABLES

In terms of delivery time, those with a high time pressure were more inclined to find delivery times statistically more important compared to those with a low, time pressure ($F(1,180) = 4.24$, $p = 0.041$, $X_L = 5.67$, $X_H = 6.06$). Similar findings emerge for future-oriented individuals ($F(1,179) = 3.97$, $p = 0.048$, $X_L = 5.70$, $X_H = 6.07$).

Mail-in rebates were more desirable among high, time pressure individuals compared to low, time pressure individuals ($F(1,180) = 4.35, p = 0.038, X_L = 4.52, X_H = 5.03$). The results were not statistically significant, however, for future-oriented individuals ($F(1, 179) = 0.021, p = 0.885$).

Interest-free financing was marginally higher among high, future-oriented individuals than low, future-oriented individuals ($F(1,179) = 3.965, p = 0.076, X_L = 5.47, X_H = 5.91$). There were no statistically significant differences for time pressure ($F(1,181) = 0.73, p = 0.787$).

TIME ORIENTATION AND QUALITY-RELATED VARIABLES

Future orientation was positively related to the three, quality-related variables. High, future-oriented individuals viewed e-tailer reputation as more important compared to low, future-oriented individuals ($F(1,180) = 10.04, p = 0.002, X_L = 5.49, X_H = 6.05$). Customer service ($F(1,180) = 6.373, p = 0.012, X_L = 5.74, X_H = 6.21$) was also viewed more favorably among high, future-oriented individuals, as was technical service ($F(1,180) = 7.55, p = 0.007, X_L = 5.95, X_H = 6.41$).

Those with high, time pressure viewed technical support as more important compared to those with low, time pressure ($F(1,182) = 5.38, p = 0.022, X_L = 5.95, X_H = 6.35$). There was no statistical difference among the two, time-pressure groups for e-tailer reputation ($F(1,182) = 0.089, p = 0.765$) and customer service ($F(1,182) = 1.83, p = 0.178$).

TIME ORIENTATION AND PRICE-RELATED VARIABLES

Individuals with high, future orientation expressed marginally greater levels of importance for the list price compared to those with low, future orientation ($F(1,180) = 3.63, p = 0.059, X_L = 5.89, X_H = 6.25$). There was no statistical difference for time pressure ($F(1,182) = 0.15, p = 0.70$).

For instant discounts there was no statistical significance for time pressure ($F(1,181) = 0.76, p = 0.385$) and future orientation ($F(1,181) = 2.00, p = 0.159$). It should be noted that, whereas a statistically significant correlation existed between the future orientation 7-point scale and instant discount ($r = 0.196, p = 0.008$), there was no statistical support once individuals were separated into two, future-oriented groups. The allocation of individuals into low, future orientation and high, future orientation was determined by a cut-off point that reflected an even distribution between the two groups. The use of a different cut-off point might have led to a statistically significant result. This being the case, one would expect that high, future-oriented individuals would view instant discounts as more important than low, future-oriented individuals because of the positive correlation between the two variables.

DISCUSSION

The above results suggest that a person's time orientation has an impact on his or her evaluation of the importance of an e-tailer's offer when purchasing on-line. These exploratory findings are presented in a proposed model in Figure 1.

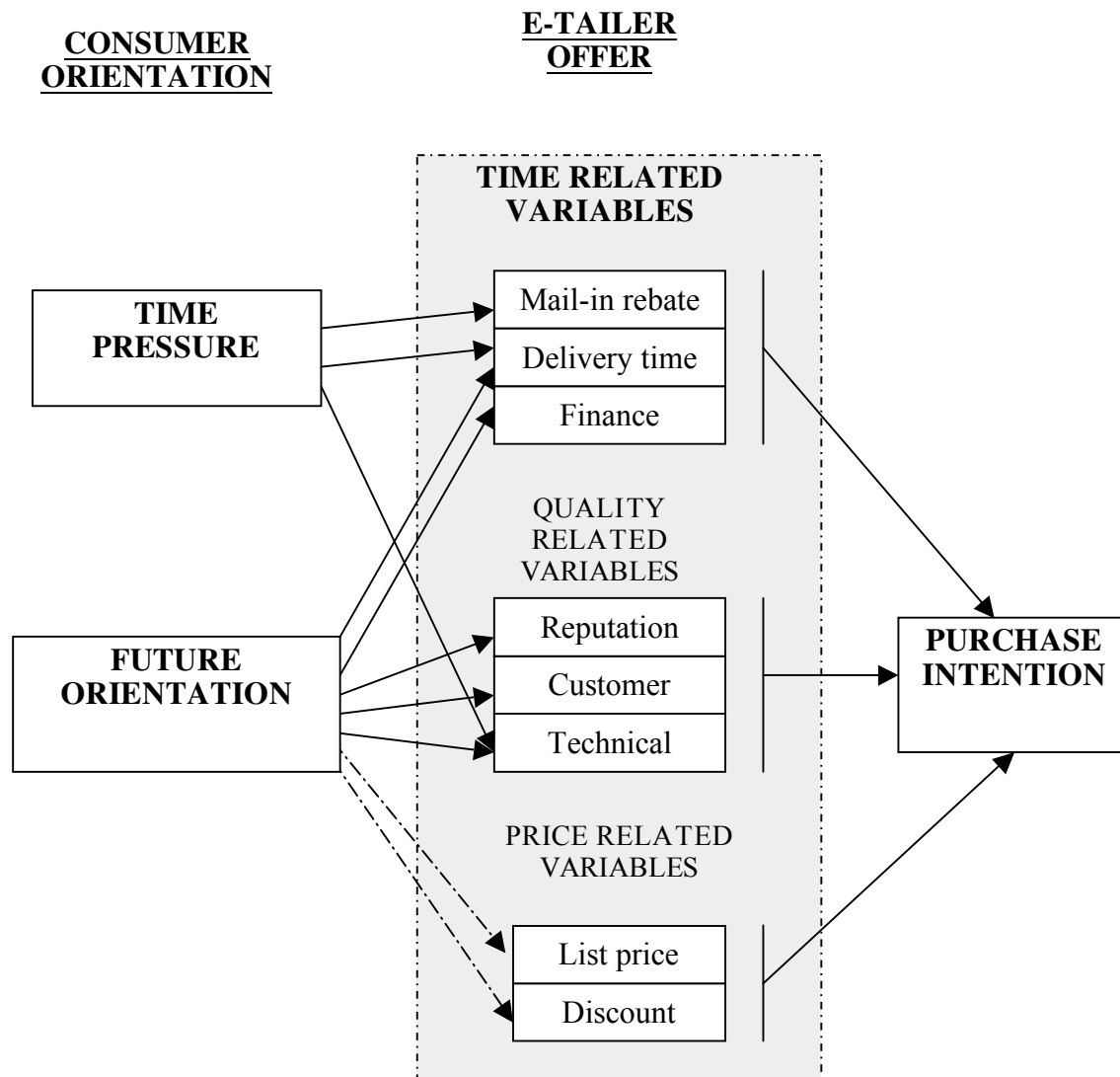


FIGURE 1. PROPOSED MODEL DEPICTING THE RELATIONSHIP BETWEEN TIME ORIENTATION AND E-TAILER PREFERENCE.

FUTURE-ORIENTED CONSUMERS

The results suggest that future-oriented consumers are more concerned with quality variables relating to the e-tailer compared to consumers who are not future-oriented. Individuals who value the future are more likely to be interested in the e-tailer's reputation, its customer service, and technical support. This might be because the consumer is interested in minimizing future problems related to the purchase of the product. In other words, knowing that the e-tailer has a

quality reputation, is customer-oriented, and provides strong technical support means that the future-oriented consumer need not worry about the product arriving damaged, that there will be no problem returning the product if needed, and that the customer will find a helpful and knowledgeable technical staff if any issues arise with the product.

Future-oriented individuals are also more likely to highlight financing options when deciding which e-tailer to use. Interest free financing options are appealing to future-oriented individuals because they are more likely to consider the long-term savings of owning now and paying later, particularly because this can reduce the monetary cost of the purchase when considering inflation. On the other hand, individuals who are not future-oriented are less likely to consider the cost-saving benefits of delaying payment until some time in the future and will be more interested in finalizing the purchase in the present.

Future-oriented respondents viewed the list price to be somewhat more important than respondents who were less oriented toward the future. List price was in general one of the more important variables among all respondents, yet there was a marginally significant difference between these two groups.

The correlation analysis suggests that there is a relationship between future orientation and the importance of discounts, although there was no statistically different support in the univariate analysis of variance. This lack of result in the second analysis might be due to the arbitrary cut-off point between high, future orientation and low, future orientation. A sensitivity analysis that varies the cut off point between the two groups might reveal significant differences between the two groups for this variable. It might be that the future-oriented individuals are more influenced by instant price discounts than consumers who are not future-oriented. This being the case, one explanation might be that future-oriented individuals are more prone to discount tactics, deciding to purchase only when products are put on sale. When no such discounts are available, these consumers might opt to wait, delaying their purchase until some time in the future when price discounts are available. Those who are not future-oriented are still influenced by discounts, but will not delay purchases if discounts are not available. In other words, discounts are a more important concept for future-oriented individuals, who might decide to delay a purchase until such discounts appear. Consumers who are not future-oriented are still sensitive to price discounts, but will also purchase items when no purchase discounts are present.

PRESSED FOR TIME CONSUMERS

Our exploratory results suggest that consumers who view themselves as always being pressed for time are more likely to regard delivery schedules and mail-in rebates as more important than those who are not as pressed for time. Indeed, delivery times might be more important to time-pressed consumers since these individuals view time as a precious commodity and, therefore, view shorter delivery times as a cost saving that significantly improves the overall value of the offering. Those who are less pressed for time, however, are less likely to consider time-saving factors as a significant reduction in cost and are more willing to wait for a product to arrive. Mail-in rebates are also perceived to be important for time-pressed individuals, which at first glance seems to be counter-intuitive. Indeed, one would expect that time-pressed individuals would not like waiting for reimbursement from mail-in rebates. It could be, however, that time-

pressed individuals are more likely to send off their mail-in rebates immediately, whereas those who are not pressed for time are less likely to mail in the rebate straight away and might indeed forget about submitting the rebate altogether or miss the deadline for processing the rebate. It might also be that those with low, time pressure do not like mail-in rebates as much because they are less likely to follow through with the paperwork. Thus, they might view this type of sales promotion as a less important incentive when selecting e-tailers.

Time-pressed individuals are more likely to consider the e-tailer's technical support as an important characteristic compared to those who are not as pressed for time. One explanation for this result could be that these individuals are concerned with potential time-consuming issues with setting up, operating, and repairing the desktop computer and, therefore, view technical support as a potential time-reducing strategy when such problems arise. Time-pressed individuals are looking for hassle-free and efficient service, and, in this instance, postpurchase assistance becomes an important attribute in the decision-making process. An efficient, convenient, and knowledgeable technical support service might, therefore, be an important attribute for e-tailers to promote.

LIMITATIONS AND FUTURE RESEARCH

The limitations of this study provide a framework for future research. The results are based on a convenience sample and cannot be generalized to a larger population. The survey questions asked individuals to rate the relative importance of various attributes, but did not consider the potential trade-offs between the various variables (e.g., Would consumers be willing to pay more for a shorter delivery time?). The survey only considered one product category (desktop computer), and the perceived importance of the various variables might differ across different product categories and price points. Only certain aspects of the marketing mix were considered in relation to the time orientations. Future research should consider other aspects of the marketing mix in the on-line environment that might be influenced by the consumer's time orientation. Finally, future research should consider the effect that a consumer's time orientation has on the decision of whether to purchase on-line or at a traditional brick-and-mortar store.

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THE EFFECT OF HOME-BASED ENTREPRENEURS' MYERS-BRIGGS PREFERENCES ON THEIR STRATEGY PERSPECTIVES

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ABSTRACT

Interest in entrepreneurship has grown significantly. Technology now enables more opportunities than ever, most particularly in the area of home-based entrepreneurship. An attempt to define the personality and behavior of entrepreneurs has proved inconclusive and now research is moving to the study of the entrepreneur in the context of the venture. One consistent finding from research searching for personality variables is that a large percentage of those entrepreneurs studied have been MBTI iNtuitors (Ns), a proportion more than double the population distribution. This exploratory mixed methods study looked at how entrepreneurs' MBTI related to their strategies and experiences. MBTI preference was found to be related to strategy and to be situational.

INTRODUCTION

Years of research have not satisfactorily answered the question, "Who is the entrepreneur?" Significant time has been spent focusing on personality variables, behavior, skills, and attributes of entrepreneurs. Much of the research has been criticized for not using common definitions or assessments (Cooper, Markman, & Niss, 2000; Morris, 2002). The search for a common personality type or set of behaviors for the entrepreneur has produced some results, though, particularly with the Myers-Briggs Type Indicator (MBTI), self-efficacy (Bandura, 1997), the big five personality attributes, and opportunity recognition (Allinson, Chell, & Hayes, 2000; Ardichvili, Cordozo, & Ray, 2003; Bateman & Crant, 1993; Baum & Locke, 2004; Begley & Boyd, 1987; Bird, 1989; Bolton & Thompson, 2000; Boyd & Vozikis, 1994; Caird, 1993; Chen, Greene, & Crick, 1998; De Noble, Jung, & Ehrlich, 1999; Hanzel, 1995; Hull, Bosley, & Udell, 1980; Littunen, 2000; Llewellyn & Wilson, 2003; Lucas & Cooper, 2005; McCarthy, 2003; Miner, 2000; Monaghan, 2000; Morris, 2002; Pendergast, 2004; Pettifor, 2004; Reynierse, 1997a, 1997c; Reynierse, Ackerman, Fink, & Harker, 2000; Smith-Hunter, 2003).

Research with the MBTI has consistently shown entrepreneur participants tend to be iNtuitors (Ns) compared to the general population (Allinson et al., 2000; Caird, 1993; Carland, 1982; Reynierse, 1997b, 1997c; Reynierse et al., 2000). The MBTI measures personality preference at a point in time and, although test-retest validity is high (Myers, McCaulley, Quenk, & Hammer, 1998), it is a static measurement.

The MBTI was first developed by Carl Jung whose theory of personality underpins the assessment. Katherine Briggs and Isabel Briggs Myers further developed the tool to what is used today. Jung believed that individuals used all dimensions rather than only the preferred one and as individuals mature over a lifetime a balance may be reached where all eight attitudes could be tapped into at any time for any purpose—a process of individuation (Wilmer, 1994). This theory implies that personality preferences, as measured by the MBTI, are situational and change due to circumstances.

Almost no research has been done that looks at entrepreneurial personality, behavior, or experiences over time. Measurements of personality, behavior, intention, strategies, and actions are all in the context of a frozen moment in time, or, the time the measurement is made. In this study, I evaluate the relationship of strategy perspectives and personality preferences over a timeline that is articulated in terms of peak and valley experiences.

THE LITERATURE

Several important studies focus on home-based business (HBB) entrepreneurs. Joanne Pratt, in a special report for the United States Small Business Association, found that “working out of the home has become a significant and growing phenomenon in the United States (Pratt, 1993). Pratt quoted a 1990 survey that found there are “7.4 million home business owners and 7.2 million freelance workers, totaling 14.6 home-based business persons out of a workforce of 122.7 million” (Pratt, 1993). In a subsequent report, Pratt found that although business owners’ profiles were similar, marked differences were found when owners were separated into home-based versus non-home-based (Pratt, 1999). More of the home-based businesses were sole proprietorships; less startup capital was necessary; fewer employees are hired; only 5% gross 1 million or more; home-based businesses move to more traditional office space when gross receipts reach about \$50,000; and many home-based business owners just want to earn a secondary income, whereas non-home based businesses are earning the primary income for the owner (Pratt, 1999). Overall, trends indicate growth in home-based business formation and its critical place in the economy of the United States. These data are representative of what was happening in the 1990s. Research that segments and develops further understanding of home-based entrepreneurs will significantly contribute to the existing body of literature.

As mentioned, so much of the existing literature concentrates on “work-at-home-moms,” (called “homework”) and/or microentrepreneurship. Nancy Jurik described self-employed homework as a gendered phenomenon (Jurik, 1998, p. 8). She stated that research on small business and entrepreneurship portrays two views of those who work from home; one view is of liberated innovators “getting away” from many of the constraints of conventional employment (Beach, 1989; Carter & Cannon, 1992; Heck, Owen, & Roe, 1995, in Jurik, 1998). The other view is that of the marginalized, minority, or disadvantaged worker (Blackford, 1991; Else & Raheim, 1992, in Jurik, 1998). In other studies, home-based entrepreneurs were viewed as those who chose to work at home in order to care for children or because of factors in the external labor market, fewer jobs available, layoffs, and so on (Ammons & Markham, 2004; Berke, 2003; Carr, 1996). Some recent research on women-owned businesses deemphasized home-based ownership, even though it is on the rise. The research concluded that home-based ownership may be a good option only for women who do not have strong financial needs (Loscocco & Smith-Hunter, 2004). Other research has looked at home-based entrepreneurs who are crafts persons (Litrell,

Stout, & Reilly, 1991). Overall, there is still a lack of attention to home-based entrepreneurship as a viable, vibrant path to business success.

A growing class of successful, professional-managerial, home-based entrepreneurs is not being studied in any significant way. This study looked at professional-level, home-based entrepreneurs who chose to leave managerial positions to start their own businesses and who ran them from home. This will be a significant contribution to the literature on home-based business.

The MBTI was developed in response to Carl Jung's theory of personality (Myers & Briggs, 1943). Jung's types—Extrovert versus Introvert; Sensor versus Intuitor; and Thinker versus Feeler—were further developed by Isabel Briggs Myers and her mother, Katherine Cook Briggs. After years of research and testing, the resulting instrument—the MBTI—differentiates 16 different types or preferences (Kroeger, 1992). The MBTI is the most commonly used personality assessment today. It is considered a valid and reliable instrument and has been used extensively in research, including research with entrepreneurs (Myers et al., 1998).

The MBTI sorts preferences into 16 different types, constructed from 8 functions: Extraversion versus Introversion; Sensing versus Intuiting; Thinking versus Feeling; and Judging versus Perceiving. These types represent dimensions that create unique areas of differentiation on a continuous scale (Myers et al., 1998).

EXTRAVERSION VERSUS INTROVERSION (E VS. I)

This dimension refers to the source of energy of the individual. An Extraverted person finds energy and vitalization from exterior sources, such as other people and social occasions. On the other hand, the Introverted individual finds energy from within.

SENSING VERSUS INTUITION (S VS. N)

The S–N dimension is the process by which an individual utilizes their senses and perceives information. The S preference tends to deal with what may be perceived with the senses—the concrete, realistic, and practical. The N, however, although starting with the concrete, quickly moves to the abstract and dwells on possibilities, patterns, and symbols.

THINKING VERSUS FEELING (T VS. F)

The Thinking preference is associated with the analytical, logical, and skeptical approach rather than the Feeler's subjective assessments. The Feeler will associate with concerns for people issues.

JUDGING VERSUS PERCEIVING (J VS. P)

Judgers arrive at conclusions and make decisions quickly. Perceivers are more inclined to keep their options open to the very last minute. Perceivers tend to be more comfortable in the midst of a lot of change or rapid change.

MBTI AND TEMPERAMENT

Broader categories of type are created when the 16 MBTI types are sorted into four functional pairs or types: SJ, SP, NF, and NT. These function types, or temperaments as described by David Keirsey, build on the MBTI 16 type definitions and are characterized as follows:

- SJ: The Epimethean temperament is characterized by a longing for duty, to be useful. SJ's are known to "make the trains run on time."
- SP: Often call the Dionysian temperament, the SP lives "in the moment," desires freedom, and does as he or she wishes, when that wish strikes.
- NF: This function pair is known as the Apollonian temperament and is a self in search of itself. Self-actualization is of great importance.
- NT: The NT is called the Promethean temperament, in search of knowledge, of knowing. Keirsey describes the NT, especially the Introverted NT, as one who lives in an entirely different social environment—with aliens—while SPs and SJs are surrounded by their own kind (Keirsey & Bates, 1984, p. 47).

A moderate number of research studies have used the MBTI to look at entrepreneurial characteristics. Randall Russ looked at home-based businesses in his doctoral research and found that almost half of the sample was either ESFJ or ISFJ types. In Russ' sample, the businesses surveyed had a low average gross income of \$5000–\$9,999. The participants in Russ' study would have not considered themselves financially self-sustaining. In addition, over 27% of the sample were in types of businesses considered to be skilled services such as computers, catering, lawn care, and child/adult care (Russ, 1996). These businesses differ significantly in financial scope and type from the home-based businesses included in this research study.

Hoy and Carland used the MBTI in a study in 1983 to differentiate entrepreneurs from managers. They found that "entrepreneurs were more intuitive, thinking, and perceptive than managers" (Caird, 1993). No significant difference was found on the extraversion–introversion measures. Hoy and Vaught found that 61% of the entrepreneurs in their study of problem-solving skills were intuitive types (Hoy & Vaught, 1981). And, other research on entrepreneurs that used the MBTI found that successful entrepreneurs were more intuitive than their non-entrepreneur counterparts and that the MBTI was an effective discriminator of entrepreneurs who were more likely to be intuitive-thinking-perceptive types dominating (Allinson et al., 2000; Carland, 1982; Roberts, 1988). Carland et al. posed the question, "Can intuition be the key to understanding entrepreneurial vision?" (Carland, Carland, & Busbin, 1997). In their view, the intuitive entrepreneur was more able to carry an abstract vision for something not yet there or not yet created. I believe that intuition plays a critical role in entrepreneurship and even more so in the realm of home-based business due to the isolated physical structure of the business that operates solo, as opposed in an office surrounded by other workers.

Reynierse used the MBTI a number of times and found that Ns dominated; NTPs were the most likely entrepreneurial type; P was associated with entrepreneurship; J with bureaucratic types; and there were more EP, NP, and TP types than Js. His research found no differences on the S-N preference scales (Reynierse, 1997a, 1997b, 1997c; Reynierse et al., 2000).

In a related study that used the MBTI, Heffner, Hunt, and Robinson looked at four possible

scales that, together or separately, might predict entrepreneurship: the Entrepreneurial Quotient (EQ), developed by an insurance company for agent hiring screening purposes; the Entrepreneurial Attitude Orientation (EAO), developed for entrepreneurial research; the MBTI, previously mentioned; and the Herrmann Brain Dominance Instrument, developed to categorize left brain/right brain dominance. Participants were obtained through a mix of university students, family, friends, and referrals. They found that the EQ was the best indicator; the EAO was second best; and the MBTI was third best. The combination of the three instruments was the “best overall indicator” (Huefner, Hunt, & Robinson, 1996). The use of MBTI to determine entrepreneurial personality types is supported by these prior studies.

THE RESEARCH STUDY

This study was exploratory and, although primarily qualitative in approach, used mixed methods to examine the question, “What is the relationship of MBTI preferences to the strategies and experiences of home-based entrepreneurs?” The research was structured as a series of case studies (Yin, 2003) with 3 sources of data: scores from the Myers-Briggs Type Indicator (Myers & Myers, 1998), coded text from 2-hour semi-structured interviews, and drawings created by the participants of their peak and valley experiences during the life span of their business. The coded interview text and drawings were analyzed in tandem to explore most fully the emerging themes.

Participants were obtained by purposeful sampling (Patton, 2002). Criteria for inclusion were that the participant had to be home-based, offer a unique product or service, and be financially self-sufficient by their own definition. Franchisees and subcontractors were eliminated. All of the 20 participants in the study were former corporate executives and managers. Most of the participants brought corporate world experience to their enterprises but, for some, the entrepreneurial venture was an entree to a new profession.

The interviews were semi-structured and focused on the strategies and experiences over the life span of the venture. The Entrepreneurial Strategy Matrix (ESM) was used as the model for the interview questions. The ESM was developed specifically to determine strategy choices for entrepreneurial enterprises (Lussier, Sonfield, Corman, & McKinney, 2001; Lussier, Sonfield, Frazer, Greene, & Corman, 1998; Sonfield & Lussier, 1997; Sonfield, Lussier, Corman, & McKinney, 2001).

Research ethics were carefully observed through the review and approval of an Institutional Review Board, the use of the Informed Consent Form, and careful observation of the privacy of each individual participant.

The qualitative data was compiled from interview texts and drawings and analyzed with NVivo, a well-known qualitative data analysis, software program. The quantitative data were compiled and analyzed with SPSS. Some of the data analysis used the “quasi-statistical method,” which is the process of converting qualitative data into a quantitative format (Robson, 2002), to determine themes and relationships among the assessment tool scores and the coding of text and drawings.

FINDINGS AND DISCUSSION

The participants consisted of a diverse set of home-based entrepreneurs.

TABLE 1. GENERAL DEMOGRAPHIC DATA

(<i>N</i> = 20)	Male	Female	Total
Years in business:			
2–5	5	5	10
6–10	2	3	5
11–20	1	2	3
20+	0	2	2
Approximate age range:			
<30	0	0	0
30–40	4	3	7
41–50	3	4	7
51–60	1	5	6
>60	0	0	0
Marital status:			
Married	5	7	12
Unmarried	3	5	8
Geographical location:			
D.C. Metro	4	9	13
Western Maryland	3	1	4
CA, FL, & NM	1	2	3
Types of businesses:			
Management consulting	2	6	8
Marketing consulting	1	3	4
The arts	3	1	4
Computer systems	2	0	2
Gifts & novelties	0	1	1
CPA services	0	1	1
Business structure:			
Partnership	4	1	5
Solo	4	11	15
Prior entrepreneur:			
Never	6	10	16
Serial	2	2	4

The breakdown of gender was 8 males and 12 females. Years in business ranged from 2 to over 20. One half of the sample had been in business between 2 and 5 years. Ages ranged from the mid-30s to the early 50s. Geographically, 13 of the participants lived in the Washington, DC, metropolitan area; 4 lived in western Maryland; and 3 lived in California (CA), Florida (FL), and New Mexico (NM), respectively. The types of businesses included: management consulting, marketing consulting, the arts, computer systems, gifts and novelties, and CPA services. Of the 20 participants, 15 were solo enterprises. Five of the 13 were partnerships. The partnerships were set up so that both partners operated from their respective homes. Four of the 20 were serial

entrepreneurs who had prior entrepreneurial experiences and/or were already starting up new enterprises while operating the current one. The remaining 16, or 80% of the participants, had ventured into entrepreneurship for the first time.

Each participant considered himself financially self-sustaining. Each was actively marketing and providing his products or services. One hundred percent of the sample was Caucasian, born and raised in the United States. The MBTI types were compiled into temperament categories to allow for larger data sets for analysis.

TABLE 2. TEMPERAMENT BY GENDER

Gender (<i>N</i> = 20)	SJs	SPs	NFs	NTs
Males	1	1	4	2
Females	0	2	4	6
Total	1	3	8	8
Percent to the total sample	5%	15%	40%	40%

Interestingly, the proportion of MBTI® Intuitive participants to total participants was 16 of 20, or 80%, with 75% of men and 83.3% of women scoring as Intuitives. This is far higher than the 25% for women and the 28% found for men in the general U.S. population and is consistent with prior research (Allinson et al., 2000; Caird, 1993; Carland, 1982; Hoy & Vaught, 1981; Reynierse, 1997a, 1997b, 1997c; Reynierse et al., 2000).

The ESM model places innovation and risk into a four-quadrant model: high innovation, high risk (IR); high innovation, low risk (Ir); low innovation, high risk (iR); and low innovation, low risk (lr). Participants were asked to review the four strategy approaches described in the ESM and identify the strategy group that most closely described their overall enterprise strategies.

TABLE 3. ESM STRATEGY TYPE BY GENDER

Gender (<i>N</i> = 20)	High I, high R	High I, low R	Low I, high R	Low I, low R	Total
Males	4	2	0	2	8
% Males	50	25	0	25	
Females	7	3	2	0	12
% Females	58	25	16.7	0	
Total	11	5	2	2	20
% Total	55	25	10	10	100

Fifty-five percent of the participants classified their strategy type as High Innovation, High Risk. The balance of the participants classified their strategy type as 25% High Innovation, Low Risk and 20% evenly split between Low Innovation, High Risk and Low Innovation, Low Risk. In Lussier et al.'s research (2001), 35% of the sample considered their strategies to be High Innovation, High Risk as opposed to 55% of this research's sample. Thirteen percent of Lussier's sample classified themselves as High Innovation, Low Risk versus 25% of this research sample. Low Innovation, High Risk strategies resulted in 37% for the Lussier study; 10% for this study, and lastly, Low Innovation, Low Risk was 15% in Lussier's research; 10% for this sample.

Lussier et al. (2001) surveyed small businesses as classified in a Dun & Bradstreet database, most likely businesses located at business addresses rather than home-based businesses. The average business employed 20 people, significantly different than this research sample (Lussier et al., 2001).

Then, during the interview and while executing the drawings of peak and valley experiences, the participants were asked to show how those strategies might have changed at certain points. The result was a timeline that spanned the venture lifecycle that detailed the strategy choices made during that time. These findings will be discussed in depth shortly. The statistical analysis of overall strategy choice to temperament is presented in the following table.

TABLE 4. RELATIONSHIP OF TEMPERAMENT TO ESM STRATEGY

ESM type (<i>N</i> = 20)	NT	%	NF	%	SJ	%	SP	%	Total	Percent of sample
High I, high R	5	63	5	63	0	0	1	33.3	11	55
High I, low R	2	25	1	13	1	100	1	33.3	5	25
Low I, high R	0	0	1	13	0	0	1	33.3	2	10
Low I, low R	1	13	1	13	0	0	0	0	2	10
Total by temperament	8	100	8	100	1	100	3	100	20	100

Note: There are no significant differences.

The straight run of data shows no significant differences in this comparison. However, A test of the differences of attitude scores (E–I, S–N, T–F, J–P) that follows in the Table 5 indicates a statistical relationship of the S–N preference and the ESM IR strategy type.

TABLE 5. MBTI ATTITUDE SCORES BY STRATEGY TYPES

ESM strategy type (<i>N</i> = 20)	E–I	S–N	T–F	J–P	Total
High I, high R	3.64	-16.4*	-.36	-.55	11
All others:	2.0	-8.0*	-1.0	-4.0	
High I, low R	-3.8	-8.0	3.6	2.8	5
Low I, high R	9.0	-5.0	-17.0	-17.0	2
Low I, low R	11.0	-11.0	3.5	-8.0	2
Total	3.05	-12.6	-.7	-2.2	20

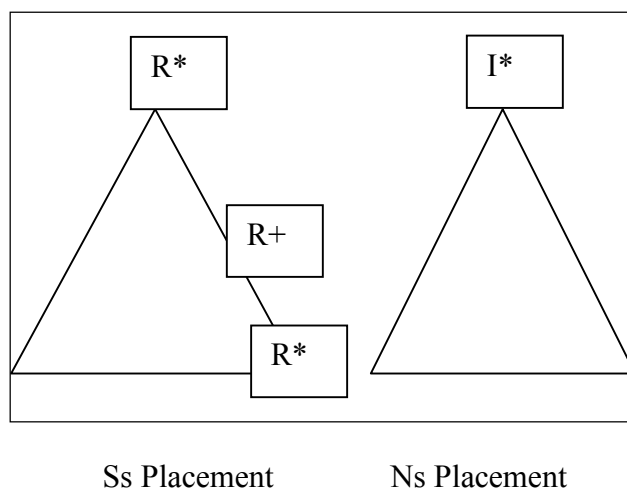
Note: Innovation is represented as I; risk is represented as R. * The *p* value = .16 for a two-tailed test.

The Intuitive attitude, or *N*, had a high mean score for High Innovation, High Risk strategies. The mean of the *S* attitude score was the lowest for this group. The difference of *S* minus *N* mean points for those participants who chose ESM strategy types other than High Innovation and High Risk was -8 versus that of -16.36 of those 11 participants who chose High Innovation and High Risk as their primary strategy type. There was no statistical significance with a *p* > .05.

The most interesting relationships, however, appeared during the analysis of the coded text and drawings of peak and valley experiences. Strategies were not static and changed over the timeline and during the experiences drawn and described. Strategy orientation differed between MBTI *N*s and *S*s in that each saw risk and innovation at different points in their peak

experiences. Ss drew more peaks and valleys than Ns when they described their new venture experiences. Ss also placed risk-oriented strategies at the peak, the downswing side, and the valley of the drawings. Ns drew far less peaks and valleys and tended to draw one or two continuing upward lines. Ns placed innovation-oriented strategies at the peak.

The resulting model demonstrates the relationship of the iNtutor-Sensor preference to strategy orientation:



*Note: *=statistically significant with $p < .05$. +=slight trend.*

FIGURE 1. S AND N PLACEMENT OF RISK STRATEGIES AND INNOVATION STRATEGIES ON PEAK AND VALLEY EXPERIENCES (N = 20)

Ss perception of their strategies as risk-oriented was statistically significant at the peak of experiences and the valley of experiences. Ss show a slight trend toward perceiving more risk than Ns on the downswing side of the peak experiences. Ns, on the other hand, significantly perceived their strategies to be innovation-oriented at the peak of the experiences. Generally, where Ss saw strategies as risk-oriented, Ns saw them as innovation-oriented.

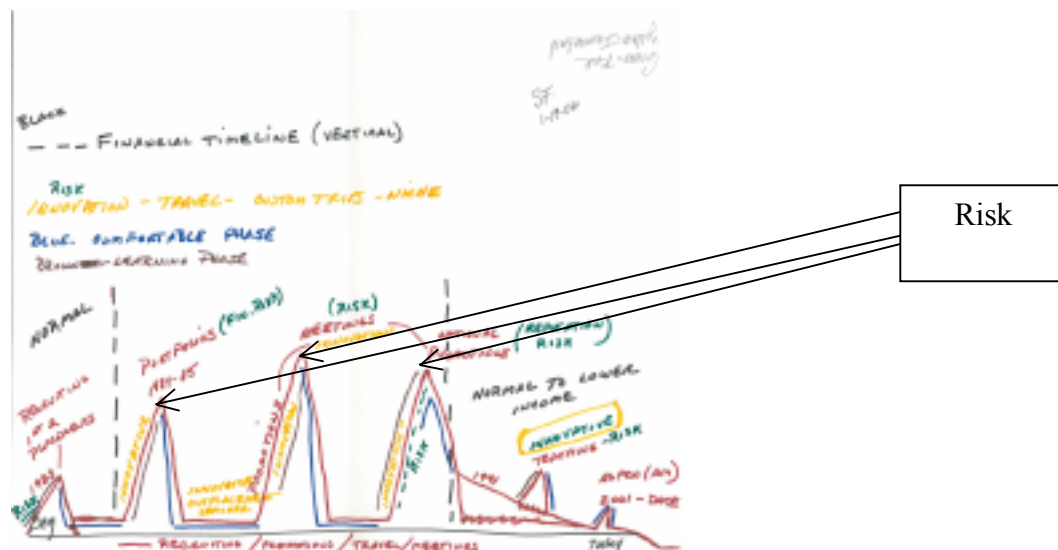
A hand-drawn diagram of a step-like terrain profile. The profile is drawn with a green line. The area under the profile is divided into sections by vertical lines. Labels include:

- Left side:** "with 100m", "distance of 100m", "distance of 100m".
- Top left:** "100m", "100m", "100m".
- Top middle:** "100m", "100m", "100m".
- Top right:** "100m", "100m", "100m".
- Bottom left:** "100m", "100m", "100m".
- Bottom middle:** "100m", "100m", "100m".
- Bottom right:** "100m", "100m", "100m".

Annotations include:

- A blue star on the left side.
- A red dot on the right side.
- Arrows pointing from the red dot to the blue star and from the blue star to the red dot.
- Arrows pointing from the red dot to the blue star and from the blue star to the red dot.
- Arrows pointing from the red dot to the blue star and from the blue star to the red dot.

Risk



Risk

The diagram illustrates the relationship between Risk and Innovation. It features a series of vertical lines of varying colors (red, orange, yellow, green, blue) and a diagonal line of text. A box labeled "Innovation" has arrows pointing to the right side of the diagram, specifically towards the blue and yellow lines. The text on the diagonal line includes phrases like "Risk", "Innovation", "Uncertainty", "Complexity", "Ambiguity", "Vagueness", "Incompleteness", "Unpredictability", "Unreliability", "Unavailability", "Unaccessibility", "Unaffordability", "Unacceptability", "Unappealability", "Unattractability". The diagram is signed "Amp" in the bottom right corner.

The graph illustrates the process of innovation over time. The x-axis represents time, with labels for 'Start', 'Learning', 'Exploration', and 'Exploitation'. The y-axis represents the level of innovation or performance. The graph shows a series of peaks and valleys, with the highest peak labeled 'Innovation'. Arrows point from the 'Innovation' label to the highest peak. The graph is divided into sections by vertical lines, with labels like 'Start', 'Learning', 'Exploration', and 'Exploitation' written below the x-axis.

Mean counts were compiled for each temperament for a more expanded look at the placement of risk- and innovation-oriented strategies on the drawing peaks and valleys. The resulting model details how each temperament perceives firm strategy when put in the context of a timeline.

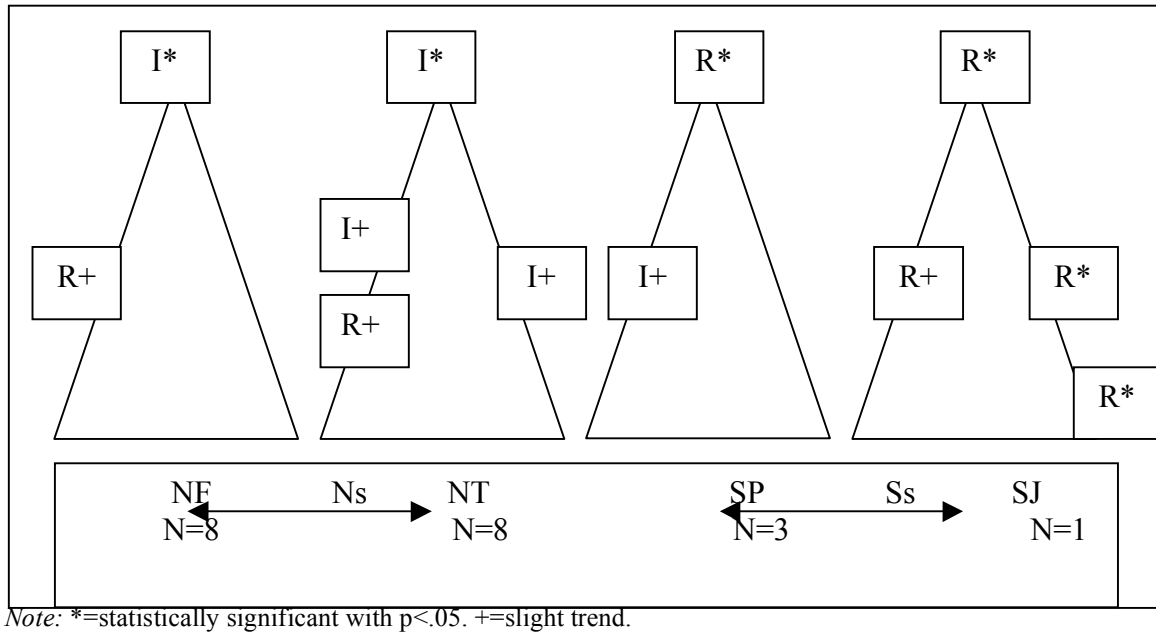


FIGURE 6. MBTI TEMPERAMENTS: PERCEPTION OF RISK AND INNOVATION

The above figures portray both statistically significant perceptions and trends of perceptions of the four different temperaments in terms of how risk- and innovation-oriented strategies fit into their peak and valley experiences. In these representations of temperament and perceptions of risk- and innovation-oriented strategies in terms of peak and valley experiences, NFs tend to see the build toward the peak experience as one where risk strategies came into play with innovation strategies in play when the peak is reached. NTs on the other hand, not only perceive innovation-oriented strategies coming into play at the peak, but also innovative strategies are at play on the build up toward the peak and the swing down from the peak. NTs also do see risk-oriented strategies on the build toward the peak of an experience. SPs are quite different in that risk-oriented strategies are in play at the peak of the experience and innovation-oriented strategies are at work on the upswing of the peak. Although there is only one SJ in the sample, I prepared a model of the peak experience for him to provide at least one SJ's perception. In his case, risk-oriented strategies are in play on all sides of the peak: upswing, top, downswing, and valley.

SITUATIONAL MBTI

MBTI type and strategies have been discussed to this point in terms of a static score. This, however, is a simplistic analysis and more is required. Jung believed that individuals used all dimensions rather than only the preferred one and as individuals mature over a lifetime a balance may be reached where all eight attitudes could be tapped into at any time for any purpose—a process of individuation (Wilmer, 1994). Miles and Snow held that strategy is a “*pattern* or *stream* of major and minor decisions about an organization’s possible future domains (Miles & Snow, 2003). From the interviews and drawings, it is evident to me that participants used multiple MBTI attitudes depending on the situation and context. I call this “MBTI-in-action.”

In this study, it has been established that strategies, defined as either risk-oriented or innovation-oriented, change over time and circumstance since when the drawings are examined what has been established as one strategy approach (risk or innovation) actually changes depending on the situation and the context. In the drawings, there are 10 potential domains where risk-oriented or innovation-oriented strategies could be placed.

TABLE 6. COUNTS OF RISK- AND INNOVATION-ORIENTED STRATEGIES CHANGING ON THE TIMELINE

	R at	I at	R at	I at	R on	I on	R on	I on	R	I		
MBTI	N	Peak	Peak	Valley	Valley	Up	Up	Down	Down	Between	Between	Total
N	16	12	27	9	2	24	23	11	9	7	4	128
S	4	13	3	8	1	8	9	6	0	3	1	52
Total	20	25	30	17	3	32	32	17	9	10	5	180
												Mean
												8
												13
												9

Ss have a higher change rate over the timeline drawing of peak and valley experiences than Ns. As previously discussed, Ss draw more peaks and valleys than Ns. They also place risk-oriented strategies at the peak while Ns place innovation-oriented strategies at the peak.

I selected 4 participants, who based on the coding of their stories, experiences, and the timeline discussion, demonstrated the most range in their MBTI preferences. I added the top scoring Ns and the balance of the Ss to this group for a total of 9 participants; 5 Ns and 4 Ss. This group's drawings were then further analyzed for where and how participants tapped into their less preferred attitude and how that related to the risk- and innovation-oriented strategies in play at the time.

TABLE 7. MBTI PREFERENCES-IN-ACTION AT THE POINTS WHERE RISK- AND INNOVATION-ORIENTED STRATEGIES ARE PLACED: THE N'S

Non-preferred MBTI dimensions (N = 5)	Kirk (ENFP)	Danielle (ENFP)	Kathryn (ENFP)	Lorraine (ENFP)	Arlene (ENTJ)	Total
Thinking						
R	4	1	1	2	0	8
I	4	0	0	0	0	4
Feeling						
R	0	0	0	0	2	2
I	0	0	0	0	2	2
Judging						
R	0	1	1	0	0	1
I	0	0	0	0	0	0

Note: Only those non-preferred attitudes that were coded are in the table.

TABLE 8. MBTI PREFERENCES-IN-ACTION AT THE POINTS WHERE RISK- AND INNOVATION-ORIENTED STRATEGIES ARE PLACED: THE S'S

Non-preferred MBTI dimensions (<i>N</i> = 4)	Kara (ISFP)	Sara (ISFP)	Brant (ISTP)	Bennett (ISTJ)	Total
Extraversion					
R	0	1	0	0	1
I	2	2	1	0	5
Intuitive					
R	0	0	0	1	1
I	0	0	0	0	0
Feeling					
R	0	0	1	0	1
I	0	0	3	0	3

Note: Only those non-preferred attitudes that were coded are in the table.

The 5 Ns tended to tap more often into a non-preferred MBTI attitude at points of risk-oriented strategies while the 4 Ss tapped into their non-preferred MBTI attitudes at points where innovation strategies were at play. This trend is the opposite of the trend that shows Ns generally perceive strategies as innovation-oriented and Ss generally perceive strategies as risk-oriented. This theme appears to be situational and it happens when the preferred attitude is challenged by the need for strategies that are less often used and, therefore, less comfortable to the participant.

For the NFs, the MBTI attitudes that were most often tapped as opposite to those preferred were Thinking for Feeling. For the NTs, the “opposite preferred” attitude was Feeling for Thinking. The SPs, all of whom were Intraverts, most often chose Extraversion. In addition, the one SJ used his Intuitive side and Feeler side.

The quantitative data from this research study shows no relationship between MBTI and strategies. However, there are statistically significant relationships between MBTI Ns and Ss and risk-oriented and innovation-oriented strategies shown in the qualitative data. Ns and Ss discuss their strategies from different perspectives: futuristic versus realistic. Ns and Ss portray, through drawings, different pictures of their experiences and how their strategies fit into them. Ns see risk- and innovation-oriented strategies at work as they climb toward a peak accomplishment; Ss see Risk at the peak and the downside of the peak. Ns see their strategies more innovative-oriented; Ss see their strategies more risk oriented. Both Ss and Ns see their strategies change over a timeline, rather than as static, permanent states. Lastly, both Ns and Ss tap into non-preferred MBTI attitudes over time and depending on the situation. However, Ns tap into the non-preferred attitudes at points where risk strategies come into play and Ss when innovation strategies come into play.

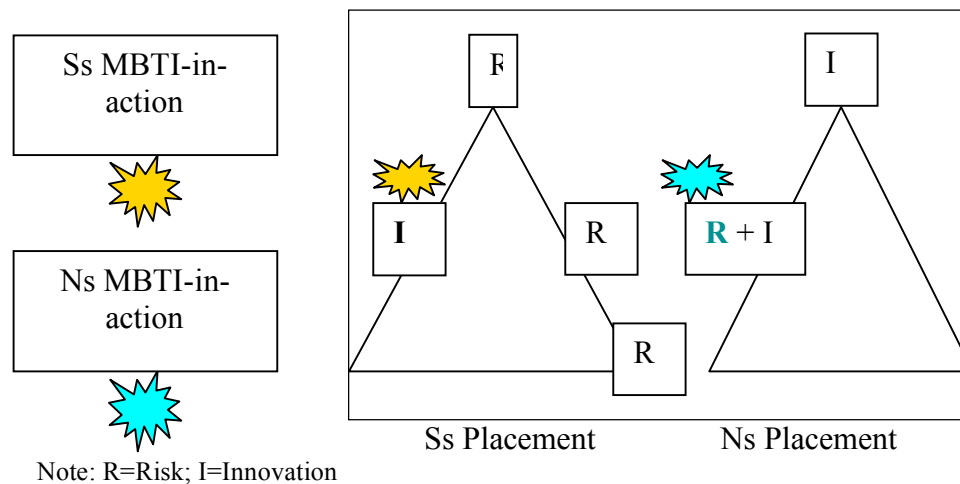


FIGURE 7. NS AND SS MBTI-IN-ACTION: USE OF NON-PREFERRED ATTITUDES

CONCLUSION

The limitations of this study are that, first, that the small sample size of 20 put it at the smallest limit to perform statistical analyses. The small size also made it difficult to establish and validate strong themes. Secondly, the sample was purposeful and, therefore, did not represent a randomized sampling of home-based entrepreneurs. The sample was not diverse in terms of MBTI, ethnicity, type of business, geographic location, and other demographic variables. Due to these factors, the ability to generalize from the findings is limited.

There are few studies of professional-level, home-based entrepreneurs. Much of entrepreneurial research has used business students as participants rather than practicing entrepreneurs. This study builds on the small amount of current research about those people who choose to work at home and “do it their way,” finding self-fulfillment and financial success. It also used actively practicing, financially self-sustaining, home-based entrepreneurs as the sample.

The findings of this study support prior findings that entrepreneurs tend to be MBTI Intuitives. However, this study finds a very different participant choice of strategy type where over half of the participants choose High Innovation, High Risk as their dominant strategy type, far higher from the 7% and 14% levels that Puetz and Hunt (1998) and Sonfield and Lussier (1997) found.

This study contributes to the literature on entrepreneurship by finding a statistically significant correlation between the MBTI S–N dimension and situational risk- and innovation-oriented strategies that are related to peak and valley experiences. Additionally, this study finds a trend that participants tapped into non-preferred MBTI attitudes, or employed situational MBTI, during the peak and valley experiences. This trend shows that Ns, who view innovation-oriented strategies in play at the peak of peak experiences, tap into non-preferred attitudes where risk-oriented strategies are in play, perhaps a point of conflict or stress. Ss, who view risk-oriented strategies as being in play at the peak of peak experiences, tap into their non-preferred strategies when innovation-oriented strategies are in play.

This study supports the conclusion that, among home-based entrepreneurs, personality and strategies are related, and so lays the groundwork for more research on this topic. So much of the literature in entrepreneurship revolves around the discussion of “*Who* is the entrepreneur?” Recently, the idea that the entrepreneur has unique personality or behavioral attributes has been discounted. It seems too simplistic to believe that one or several variables are responsible for such a complex set of activities such as conceptualizing, starting, and running a small business. However, “who” the entrepreneur is plays a critical role in how he or she carves and maintains a strategic business niche for himself or herself.

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