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Laura Frances Bright

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**Consumer Control and Customization in Online Environments:
An Investigation into the Psychology of Consumer Choice and its Impact on Media
Enjoyment, Attitude, and Behavioral Intention**

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Impact on Media Enjoyment, Attitude, and Behavioral Intention**

by

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Dedication

To my grandmother,

Laura Frances McGehee Westbrook

May 17th, 1913 – May 8th, 2006

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**Consumer Control and Customization in Online Environments:
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Impact on Media Enjoyment, Attitude, and Behavioral Intention**

Publication No. _____

Laura Frances Bright, Ph.D.
The University of Texas at Austin, 2008

Supervisor: Terry Daugherty

In today's marketplace, new technology innovations and the changing media environment offer endless opportunities to consumers: seemingly infinite amounts of information via the internet, an abundance of broadcast channels, and higher functionality and control through such technologies as online media aggregators and digital video recorders. These technological changes have redefined the media landscape and thus the role of advertising in new media consumption. As interactive media markets become increasingly segmented, it is vital for advertisers to examine effective techniques for communicating with consumers via such customized and controlled channels. The emergence of Web 2.0 technologies, among them media content aggregators such as Google Reader or NetNewsWire, has created a plethora of niche markets online, attracting more than 69 million users in 2006 and generating \$450 million plus in advertising revenues in the same year (Verna, 2007). Designating this phenomenon as 'the control revolution,' Shapiro (1999) claims that technology has brought with it a reduction of institutional control resulting in an increase of individual control, both in

terms of content selection and advertising exposure. This vast population of consumers represents a new wave of information seekers whose ability to process information in such environments must be examined further.

The availability of highly customized information spaces allows consumers to tailor their exposure to specific media needs and desires (Liang et al., 2006). The tailoring of online media exposure has been made possible by web-based applications that aggregate content per the consumer's specifications. This further allows media exposure to be more tailored or "consumer-centric" rather than "publisher-centric" (Morrissey, 2005). Using a 2 x 2 x 3 factorial design, the effect of customization on a consumer's media enjoyment, ad attitude and behavioral intention was tested to determine if the perception of choice in media content makes a significant impact on user experiences. A total of 237 subjects participated in a lab based experiment, involving a pre-test survey, exposure to the stimulus and a post-test questionnaire.

The results indicate that subjects do indeed perceive greater media enjoyment when exposed to a customized online environment as compared to a standard online environment. Additionally, subjects who were exposed to a customized media environment had greater behavioral intention for interacting with advertising. However, subjects who were exposed to advertising via a standard online environment had a more positive attitude toward advertising than those exposed to advertising through a customized environment. In sum, customized environments offer a greater sense of media enjoyment for consumers within this sample, however the types of advertising used within these environments requires further investigation to determine what is optimal.

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Chapter 1

Introduction

In today's marketplace, new technology innovations and the changing media environment offer endless opportunities to consumers: seemingly infinite amounts of information via the internet, a plethora of broadcast stations and channels, and higher functionality and control through such technologies as online content aggregators and digital video recorders. These technological changes have redefined the media landscape and thus the role of advertising in new media consumption. As interactive media markets become increasingly segmented, it is vital for advertisers to examine effective techniques for communicating with consumers via such customized and controlled channels.

Media fragmentation, consumer interactivity, and greater ability to personalize content are all products of recent technology advancements leading to one outcome – the empowerment of the consumer. Shapiro (1999) claims that technology has brought with it a reduction of institutional control resulting in an increase of individual control, both in terms of program selection and advertising exposure. Further, Shapiro (1999) asserts that we live in an environment that fundamentally allows us a higher level of control; this is not the age of narrowcasting where someone else prepares packaged content for you, but you can prepare a whole media content package for yourself and limit your exposure to advertising accordingly.

The emergence of Web 2.0 technologies, including personalized content delivery services, has created an abundance of niche markets online, attracting more than 69 million users in 2006 and generating \$450 million plus in advertising revenues in the

same year (Verna, 2007). The personalized, or customized, media environments made available to consumers through such services have the potential to decrease information overload by tailoring content to the consumers specifications as well as provide a sense of perceived control to the consumer. The availability of these services has increased in recent years with personalization services at most major search engine sites, including Google and Yahoo as well as being available via desktop applications (i.e., NetNewsWire, RSS Bandit, Apple Mail RSS, etc.). As such, a customized online environment would be defined as any type of web-based content aggregation application that allows a user to customize his or her content per their specifications. The consumer benefits of customized online environments, coupled with their projected growth in popularity, make them a potentially rich advertising outlet within the interactive niche. (Godek & Yates, 2006; Liang, et al., 2006)

The availability of highly customized information spaces allows consumers to tailor their exposure to specific content needs and desires (Liang, et al., 2006). The tailoring of such exposure has been made possible by web-based applications that aggregate content per the consumer's specifications. This further allows media exposure to be more tailored or "consumer-centric" rather than "publisher-centric" (Morrissey, 2005). As the consumption, creation and distribution of web-based content continues to evolve, content aggregation tools and Web 2.0 applications that utilize Really Simple Syndication (RSS) technology will become more usable and accessible to consumers, helping to create manageable information spaces that are personalized, customized and relevant. These types of information spaces provide a conduit for exposing consumers to context relevant advertising in a less cluttered environment, thereby potentially leading to

increased cognitive involvement and liking, or attitude. As the effectiveness of traditional interactive advertising continues to decline, customized online environments could provide an arena that allows advertisers to connect with consumers during moments of peak user satisfaction (Ad Age, 2007).

The widespread consumption and creation of Web 2.0 technologies in recent years has confirmed the emergent trend of increased consumer control over media exposure. Consumers are beginning to rely less on media being pushed at them through traditional channels, and instead are focusing on creating a media environment that revolves around them. To compete in this environment, advertisers must learn how to both gain exposure via customized media environments as well as use these in an advantageous way to drive consumers to their websites. If used properly, advertisers can not only expose consumers to their brand in highly context relevant situations, but also prime consumers for further content and advertising interactions via their websites.

From a theoretical perspective, several approaches apply to the investigation of consumer response to customization in online environments. As identified by Liang, et al. (2006), information overload, uses and gratifications and user involvement are three frameworks typically applied when empirically investigating consumer response to personalization, or customization, in media environments. In this case, information overload theory implies an increase in user satisfaction as personalization increases, while the uses and gratifications theory provides the motivational underpinnings of media selection. Additionally, user involvement theory “implies that users prefer content recommended by a process in which they have explicit involvement” (Liang, et al., 2006, p. 2). It has been shown that uses and gratifications theory provides a bridge between the

psychological characteristics of consumerism and mass media consumption. According to the expectancy-value approach to uses and gratifications (see Palmgreen, Wenner & Rayburn, 1980), consumers' compare between the gratifications sought and obtained. Based on past media experiences, they develop their future media exposure patterns in a never-ending circular process (Rubin, 2002, p.533). Past research linking general media use and various gratifications from the media is well established (e.g. Donohew et al. 1987; Palmgreen, Wenner & Rayburn, 1980). Accordingly, it is a logical approach to apply what is a well-known paradigm in traditional media to the use of customized online environments and their advertising related behaviors.

As content exposure through Web 2.0 technologies further penetrates the market, more research must be done to better understand how consumers are interacting in such environments, and thus what types of interactive advertising will be most beneficial to reach such consumers therein. The 'control revolution' (Shapiro, 1999) represents a vast population of new consumers, sometimes characterized as 'digital natives', whose ability to process information in media environments is 'fundamentally different than their predecessors' (Prensky, 2001, p.1). It is this fundamental difference that warrants further investigation with regard to how consumers respond to content within customized online environments depending on their desire for control.

For more than three decades, scholars have sought to understand why people use certain media content and its impact on their experience, the gratifications they obtained and how it impacts future behavior or consumption. As the delivery mechanisms for mass media continue to evolve, it is vital to better understand how consumers are controlling their media environments and how they perceive advertising delivered through such

outlets. Although the potential benefits of customized online environments are clear, they have not received due attention as an upcoming, niche interactive advertising vehicle. Currently, exposing consumers to advertising in the online environment via standard websites typically involves a combination of interactive banner advertising, sponsored search, rich media, email marketing and pop-up ads – all of which have staggeringly low response rates (Endicott, et al., 2007). As such, this study will provide insight into consumers perceptions of advertising within customized online environments as well as how the act of customization impacts their media enjoyment, attitude toward advertising, and behavioral intention for future use.

Chapter 2

Literature Review

Mainstream media, including television, radio, and print publications, have moved through an evolutionary lifecycle since their inception and are continuing to evolve into ever more fragmented media offerings. Similarly, the online media landscape has evolved into a robust information space that provides both marketers and consumers an outlet for efficient, timely communication as well as entertainment, information seeking and commerce. As increasing numbers of consumers direct their attention away from traditional media and instead toward interactive media, marketers are being challenged to integrate their offerings with those created by consumers themselves as well as make advertising offerings available through increasingly customized online environments. The last several decades have shown a continued decline in newspaper readership and magazine circulation, and, while it continues to show growth in overall viewership, the television market is plagued by a proliferation of program offerings leading to fragmented audiences and decreasing overall program ratings (Anderson, 2005). This shift toward greater engagement with interactive media presents a promising new wave of advertising outlets for marketers to have at their disposal.

The Internet has shown itself to be an outlet where traditional forms of media entertainment can converge and be offered to consumers in a time and place that is most convenient for them (Tauder, 2006). With usage expanding on a yearly basis, the Internet has come to serve as a media outlet for an overwhelming majority of American adults (71%). Amongst these consumers, an increasing amount of online content is being made

available via Web 2.0 applications, such as the customized new environments available via Google Reader (Verna, 2007). While traditional media are nowhere near extinction, it is clear that trends are changing such that consumers are more in control of their media consumption in both the interactive and traditional realms. Not only have media evolved to distribute a diverse collection of news and information, they have also enabled consumers with a greater capability to contribute their thoughts, opinions, and personal media through websites that support user-generated content and social networking (Daugherty, Eastin & Bright, 2007). This shift toward greater consumer control coupled with a dramatic increase in the amount of content available online as the potential to reward consumers with feelings of control while also causing information overload. It is this dichotomy that makes customized online environments fertile ground for experimentation regarding the effectiveness of content delivery and interactive advertising.

Customization in Online Environments

Over time, the Internet has become a dynamic, highly personalized information space where consumers can tailor their media exposure to their specific needs and motivations (Liang et al., 2006). Tailoring of media exposure has become a reality for consumers as technologies have advanced in recent years, including the advent of such consumer control based technologies as the DVR, user-generated content websites (e.g., YouTube, Blogger, Flickr, etc.) and online content aggregation services (e.g., Google Reader). As consumers continue to desire greater control over media environments and advertising exposure, the use of such technologies will no doubt expand beyond the niche markets they now serve. Customized online environments make media exposure more

consumer-centric rather than publisher-centric and thus provide a natural choice for consumers who have a high desire for control as these types of environments allow them to control their content stream (Morrisey, 2005).

For much of the 20th century, humans have consumed information and advertising through a standard set of media outlets, including television, newspapers, magazines and radio. Within these media, advertising is typically pushed toward the consumer in an effort to interrupt their media viewing experience and attract attention toward the product or service being advertised (Godin, 1999). As new media outlets, such as the Internet, have emerged, this tactic of interruption marketing via traditional channels has become evermore disruptive for consumers leading to increased levels of advertising annoyance and avoidance. To put this into an interactive context, the use of such push strategies online, such as banner ads and spam e-mail, are perceived by consumers as annoying, disruptive and intrusive (Li et al, 2002), while ads that are congruent with website content have been shown to generate more positive brand attitudes (Cho, 2003). Consumers, with their combined sense of increased media control and ad avoidance mechanisms, are extremely difficult to reach with traditional push marketing strategies. Thus, it is imperative for advertisers to devise new methods for interacting with consumers via customized media channels, such as those being investigated with this study.

Pull marketing strategies are a potentially effective way to communicate with online consumers as they are rooted first and foremost with the consumer, thereby allowing for a high perception of content and media control during exposure. The ability to push advertising content in the online environment has been possible since the inception of the Internet as such exposure mechanisms are inherent in the structure of this

information space. Indeed, the ability for consumers to pull advertising content into their media landscape, such as opt-in email newsletters, has also been available since the inception of the Internet, however, Web 2.0 based content aggregation services have streamlined this process in such a way that consumers can pull relevant content into their lives with little effort beyond subscribing to an RSS feed on a given website. With such a vast amount of content available online, it is not uncommon for consumers to be overloaded with information; this overload severely limits one's capacity to process information (Lang, 2000). To combat this information fatigue, content customization applications allow consumers to pull desired content into a centralized location (e.g. a web-based or desktop application) where they can peruse the information at their leisure in a time and place that is most conducive to them (Garcia and Valdes, 2004).

Content customization applications, among them NewsFire, Feedster, Bloglines, NetNewsWire, RSS Bandit, and Google Reader, can be customized by the consumer to comb the web for specific content (i.e. keyword searches) or media content from websites that they visit regularly, such as blogs, newspapers, or photo feeds (See Figure 1). Once customized, the content aggregation tool will then automatically refresh media content per the consumer's specifications; similar to checking email, news feed applications typically check for new content several times a day. This continuous feeding of information to the consumer via customized online environments has the potential to provide benefit to both consumers and interactive advertisers. Consumers could potentially see a decrease in information overload and advertisers could have a new niche for interacting with traditionally hard to reach consumers. Figure 1 displays an example

such an application (NetNewsWire) that contains both media content and a traditional banner advertisement (480 x 60 pixels).

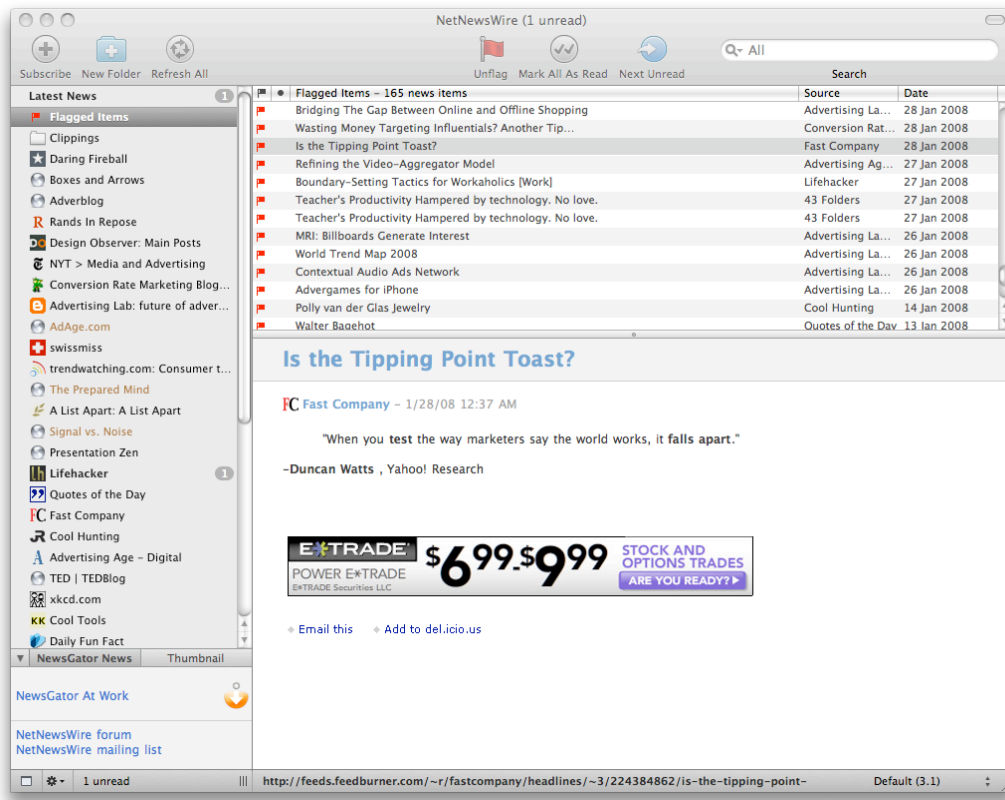


Figure 1: Screenshot of a Content Aggregator with Advertising Present

Content aggregation tools continue to gain standing in the online market and are becoming increasingly integrated into web browsing applications thereby expanding consumer access (Vickers, 2007). With this increase in accessibility to content, consumers are allowed to pull desired content into their media landscapes making for a more cohesive and manageable information exchange for those who publish online content as well as the advertisers that utilize such outlets to communicate a message. As a result, content aggregation applications are an important tool for both advertisers and media to be aware of because they facilitate the delivery of messages alongside relevant,

customized media content. In addition to web and personal computer based applications, content aggregators can also transfer to mobile devices such as Palm pilots or iPhones, thereby further increasing the availability of content.

Given that customized online environments are an emergent technology, little academic research has been completed to empirically investigate the effects of customization, or control, on this type of media experience. As the creation and distribution of content via Web 2.0 technologies continues to evolve, content aggregation tools will become more usable and accessible to consumers, helping to create a manageable information space that is customized and relevant. Moving forward, advertisers and marketing professionals must shift their thinking from a traditional push strategy to one that enables consumers with the desire to pull their content into self-defined media environments (Tauder, 2007).

In essence, using content aggregation applications compatible with RSS technologies, consumers are enabled to pull relevant content into their media landscape, as opposed to having irrelevant messages pushed at them during their information seeking process. With this increase in perceived control over their content exposure, consumers could potentially have more cognitive capacity to process information as well as be exposed to advertising with increased relevance and personalization. Current forms of available advertising in RSS feeds include banner ads, keyword ads, sponsorships, and product placement (See Appendix A for example screenshots). To compete in today's convergent media landscape, advertisers must adapt their communication strategies to customization and control parameters, such as 1) addressability, 2) interactivity, 3) time-

shifting, and 4) interoperability (Tauder, 2006). Customized online environments have the potential to help advertisers communicate within these new information parameters.

The Psychology of Consumer Choice

At the most fundamental level, the advent of customizable technologies has given consumers a greater choice in their exposure to media and advertising content. While established control technologies allow consumers to record multiple television stations, skip advertising and time-shift programming to their needs, customized online environments provide a similar function in that they tailor news content to make it more addressable, customized and informative for consumers while saving them time, providing information value and ease of information overload (Tauder, 2006). To operationalize the construct of consumer choice as it applies to customized online environments, for the purposes of this research, consumers will be exposed to a stimulus that primes the customization category and sets expectations accordingly. Hence, it is imperative to better understand the impact of priming and choice on consumer psychology within the cognitive, affective and behavioral realms.

According to Herr (1986), an “individual’s expectations indeed affect the nature of a behavioral interaction” – regardless of whether this expectation was set by the consumer or someone independent of the consumer, such as a lab researcher (p. 1106). Empirical research has also confirmed that when consumers are primed with a given category, they are more likely to use that category as a reference when evaluating information (Higgins and King, 1981; Srull and Wyer, 1978). While Herr’s (1986) work focuses primarily on the judgmental and behavioral consequences of priming in social interactions, his findings suggest that expectations have a considerable impact on

behavioral intention. To further delineate the process that occurs when consumers are primed with categorical information, Higgins and King (1981) describe the process of priming, or framing of information, as an energy cell process whereby consumers will apply priming elements to the evaluation of new information (i.e. the experiment stimulus) so long as the stimulus is relative to the category. Alternatively, Srull and Wyer (1981) look at priming effects using a storage bin model. In their model, when consumers are primed with a given category, for example customization of media content, the category is placed atop the mental storage bin and used as the primary point of evaluation for subsequent incoming information. Thus, if the incoming information is congruent with the primed category, the preceding experience will be catalogued within the primed category for future use. It is important to note that both of these models are constructed on the tenet that the primed category, in this case ‘customized online environments’, will be invoked when evaluating incoming information. As such, affective dimensions, such as attitude and enjoyment, could be impacted depending upon how well the incoming information maps to the primed category (Herr, 1986).

According to Kardes (2002), the priming effect is a common tactic used in mass media to influence consumers across a variety of subjects and concepts – often times priming consumers with information that they rarely think about. Given the novelty of customization in the online environment, it is possible that consumers rarely consider their options concerning customization of news content; in fact it could present an ambiguous category target for some consumers. Based on data presented by Herr (1986), the ambiguity of the target has some impact on a consumers interaction with the stimulus,

however most are unaware of the “subtle influence” that priming provides for a given experience (Kardes, 2002, p. 68).

This study will use priming as a mechanism to simulate the experience of customizing content in the online environment. Although theoretically the presentation of customized news environments to consumers should be straightforward, many challenges exist when considering presentation style, order effects and the usability of different content aggregation services. Thus, in some experimental cases, priming will be used to activate the customization category before exposing subjects to an online news environment. Specifically, priming effects will be measured in terms of how they impact a consumer’s media enjoyment, attitude, and behavioral intention. In addition to varied levels of priming, it is anticipated that a consumer’s desire for control will have an impact on their experience with customized online news environments. As such, the following section will review control as a construct within the model of customized environment usage.

Consumers’ Desire for Control in Media Use

Humans strive to be causal agents; the source of their behavior and their own environment (DeCharms, 1968). Shapiro (1999) notes "our interest in personal control is motivated as much by a survival instinct as by narcissism. It is key to our sense of self-esteem and confidence" (p. 23). Accordingly, recent studies suggest that our desirability of control emanates from biological determinants as well as social ones (Declerck, Boone, & De Brabander, 2006). Due to the natural prevalence of control in our lives, it has been studied in different forms, scales, and terminologies. For example, control has been examined in the literature as a desire for control (Burger and Cooper, 1979), a locus

of control (Rotter, 1966), actual control (Cramer & Perreault, 2006), perceived control (Godek and Yates, 2005), behavioral control, cognitive control (Faranda, 2001; Haidt & Rodin, 1999), decisional control, and feeling in control (Declerck, Boone, & Brabander, 2006).

Desirability of control is defined as "a stable personality trait reflecting the extent to which individuals generally are motivated to control the events in their lives" (Burger 1985, p. 1520). According to Burger and Cooper (1979), desirability of control is a motivational trait, which measures how sought-after the personal control trait is for a person. Clearly there is a motivation in our nature to control life's events, however, as with other personality traits it ranges on a scale across different individuals. People vary and thus demonstrate different propensities toward control, which could help explain our different behaviors. According to its operational definition, a person who exhibits a high desirability of control is a leader, assertive, active, decisive and manipulative in situations to create desired outcomes. Conversely, a person who exhibits low desirability of control is more influenced by others, nonassertive, uncertain, doubtful and passive (Burger & Cooper, 1979). Studies that have used the desirability of control construct demonstrate how differences in a consumer's desirability of control explain daily behaviors and decisions such as achievement-related behaviors (see Burger, 1985 and also Burger, 1992) and proneness to depression (see Burger 1984).

Directly related to the current research, past work has connected the control construct with media use (Schutz, 1966). For instance Schutz suggests, "three interpersonal needs - inclusion, affection, and control - influence all aspects of communication between people" (in Rubin, 1993, p.161). Further, Rubin (1993) has

linked external control (related to the belief of fate and chance occurrence) with passive audiences and internal control (related to the belief of self-determinism) with active media audiences. Summarizing research into the latter construct, Rubin states that people with strong external control are fearful of society, indiscriminant or ritualistic media consumers, are not motivated by freedom to choose, and tend to be persuaded more easily by media content. Conversely, people with strong internal control demonstrate the opposite tendencies. In the field of interactive media, Wu (2006) demonstrated that control, as an individual/personality trait, is related to media use. Alpert et al. (2003) examined the environment of e-commerce and note that the issue of control is pivotal to consumers in the media experience: “the clearest result to emerge from our studies is users' fervent desire to be in control” (Alpert et al., 2003, p.385).

Althaus and Tewksbury (2000) probe the use of the Internet as a surveillance medium that helps gratify two needs while consuming political news contents: the need for information and the desirability of control. Their findings suggest that desirability of control is a strong predictor of news exposure — at least as strong as traditional political knowledge as a predictor. They also claim that the control construct is positively related to surveillance with the media. That is, the greater a person’s desirability of control, the more they will expose themselves to the media. The literature provides evidence which links control and general media use (e.g. Althaus & Tewksbury, 2000; Auter & Ray, 1999; Rubin 1993). Moreover, research supports the notion that desirability of control is positively related to media use. Accordingly, it is expected that desire to control will positively predict the use of customized online environments as well as the interaction with advertising therein.

In marketing, an increase of perceived control was linked to pleasantness in service and consumption experiences (see Chandran & Morwitz, 2005; Faranda 2001). Rubin (1993) has further demonstrated a positive correlation between control and communication motivation for pleasure. Within the context of interactive media, Liu and Shrum (2002) have developed a theoretical model for interactivity and found that desirability of control is a key factor in obtaining satisfaction from the interactive process. They suggest that people who have a high desirability of control will be more satisfied with interactivity than people who have a low desirability of control.

Thus, it is anticipated that consumers with a high desire for control will experience greater media enjoyment when exposed to a customized online environment. Along with creating a perception of control, customized online environments also have the potential to increase consumer enjoyment by decreasing information overload. The following section will review information overload as an independent construct and how it can potentially impact a consumer's media experience.

Information Overload

Despite existing for a mere 5,000 or so days, the commercial Internet contains an incredibly vast amount of information that can easily overwhelm even the most adept consumer of information (Kelly, 2007). As information loads become greater, the ability of a consumer to process cognitive stimuli in a reasonable manner becomes increasingly difficult. In many cases, this excessive stimulus can lead to consumers becoming overwhelmed and unable to focus on their target goal – be it related to entertainment, information seeking, or social motivations. With new technologies, such as content aggregators, the glut of information available online has become more manageable and

palatable for consumers who elect to engage with such media experiences. Given the existing reciprocal linkage between information load and user satisfaction (Liang, et al., 2007), it is intuitive that consumers with high levels of perceived information overload may experience greater media enjoyment when given the capacity to customize, or tailor, their media exposure to topics of interest. As such, it is imperative to examine a consumer's perceived information overload as a potential factor during exposure to customized online environments.

Across all types of media, information overload can be caused by a variety of factors, including but not limited to information quantity, quality, format (Ho and Tang, 2001) as well as the number of ideas present, idea diversity, time constraints, and topic area (Grise and Gallupe, 2000). When compared to traditional media, online environments provide a level of interactivity and expanse of available information that creates an interesting paradox. Today's consumers have more information available to them than ever before, however due to the glut of information available as well as the variety of interactive formats it is available in, information overload is prevalent. Once overloaded with information, few if any consumers will be able to process auxiliary information, such as advertising, leading to a loss for both consumers and advertisers (Lang, 2000). Customized online environments could help compensate for this loss by creating a niche environment for advertisers to communicate with less overloaded, and more cognitively available, consumers.

Advertising abounds across all aspects of today's interactive marketplace and is often described as an impediment for consumers as they seek goal fulfillment online while undoubtedly contributing to feelings of information overload as well (Cho and

Cheon 2004; Li, Edwards and Lee 2002). With this glut of information, consumers can be overwhelmed, given their limited capacity for processing information. In advertising and media effects research, the limited capacity model (LCM) of mediated message processing provides a framework for examining how consumers explicitly process media content delivered through various media vehicles (Lang, 2000). The LCM is rooted in the information processing aspects of cognitive psychology.

The LCM is based upon two primary tenets, 1) consumers are information processors by nature, and 2) consumers have relatively limited resources available to process information at any given time (Miller, 1956). As humans, one of the primary tasks that consumers do is process information, including media content and advertising. According to Lang (2000), the act of processing information can be divided into three sub-processes that are conceptually more tenable in a linear fashion, but whom occur in an iterative, continuous and oft times simultaneous way within a consumer's cognitive realm. The three sub-processes are, 1) encoding, 2) storage, and 3) retrieval. During the encoding phase of information processing, a consumer creates an "idiosyncratic representation of the message" based upon controlled and automatic selection processes (Lang, 2000, p49). While controlled selection processes are a reflection of a consumer's goals, motivations and expected outcomes, automatic selection is activated as a stimulus presents information that is relevant to the consumer's goal fulfillment (i.e., ad relevance) or as the information environment encounters an unexpected change due to the presence of a stimulus (i.e., ad intrusiveness) (Graham, 1997; Ohman, 1997). The storage process begins after the initial encoding phase and involves transferring the information from short-term storage to long-term storage to become part of an associative memory

network. The last phase, retrieval, involves searching the associative networks in long-term memory and reactivating information into working memory as needed (Lang, 2000).

As it relates to media content, the LCM provides explanatory power as to why certain messages may be encoded while others are not. Simply put, the information processing components of encoding, storage and retrieval typically work simultaneously; as such, if a consumer decides to allocate resources to a primary task (i.e. reading news through a content aggregator) thereby limiting the resources available to secondary tasks (i.e., processing advertising in such environments) the encoding of such secondary information will suffer. Thus, as the LCM dictates, processing resources can be increasingly allocated to a single sub-process, resulting in a failure of optimal performance amongst the remaining two sub-processes.

In sum, the LCM provides a framework for testing a consumer's ability to process information under a variety of cognitive loads. In a customized online environment, consumers encounter fewer advertisements and are instead exposed to articles and news items they have self-selected or personalized. While traditional news websites are typically cluttered with a plethora of advertising messages, RSS feeds offer advertisers a place to reach niche markets of consumers amongst far less advertising clutter. Consumers will ultimately carry their ability to avoid interactive advertising ("banner blindness") into customized media environments, however, these environments present an arena where highly customized and controlled content can be brought to consumers.

Based on current growth in Web 2.0 environments and online information in general, consumers will continue to deal with information overload as they navigate the various information spaces upon which they have come to rely (Verna, 2007). The LCM

provides explanatory power for how customized online environments can help consumers deal with information overload – such environments could potentially aid consumers information processing by providing relevant and personalized content in an uncluttered interface. Similar to desire for control, a consumer's perceived information overload level will be considered as a potential factor in the relationship between customization and the cognitive, affective and behavioral components of a consumer's experience.

Media Enjoyment

The term *enjoyment* has been conceptualized in media studies to “indicate a general positive disposition toward and liking of media content” (Nabi and Kremer, 2004, p. 290). Several scholars have attributed an increase in information processing capabilities in interactive environments to states of media enjoyment within consumers (Sherry, 2004; Sicilia and Ruiz, 2007). In a recent study by Sicilia and Ruiz (2007), a state of enjoyment within a consumer was found to “enhance, rather than impede favorable information processing” when navigating a standard web environment, such as a corporate website. Additionally, Hoffman and Novak (1996) have found that an enjoyable experience will increase learning, provide a more positive subjective experience, and promote exploratory behavior. Finally, Huang (2003) notes that more intense enjoyment states within consumers indicate higher perceived performance of interactive environments, in terms of usefulness and pleasantness, while Webster, Trevino and Ryan (1993) confirm that the flow experience is directly related to expected future technology use, or behavioral intention. As this relates to customized media environments, Sicilia and Ruiz (2007) show empirical evidence that interactive

environments can be used by consumers to “aid in making decisions” and “enhance online processing and enjoyment” (Sicilia and Ruiz, 2007, p15).

It is well documented in the uses and gratifications research that consumers use media for enjoyment. As such, there are a variety of factors that will contribute to a consumer’s sense of media enjoyment. As this relates to control, consumers who feel more in control of their media environment may receive more media enjoyment because they can customize a content package that is relevant to their needs thereby reducing the amount of time it takes to achieve their goals. Additionally, as documented by Liang, et al. (2007), decreases in information overload can increase user satisfaction with personalized media environments.

Feelings of enjoyment can easily be associated with those of satisfaction – for example, a consumer may be satisfied with and find enjoyment in a given media experience. As such, Palmgreen and Rayburn’s (1985) discussion of media satisfaction offers an important perspective on the construct of media enjoyment as it is operationalized herein. Although satisfaction is a key concept in other areas of social science, little attention has been paid to this concept in the area of media studies. As it pertains to this research, the concept of satisfaction has been defined as pleasure / displeasure, consumption experience (i.e. navigation experience in customized online environment), and evaluation of the benefits of consumption (Palmgreen and Rayburn, 1985). In addition to its association with satisfaction, media enjoyment can also be linked with attraction, liking, and preference in the media literature (Nabi and Kremer, 2004; Zillman and Bryant, 1994). However, the most poignant conceptualization of media enjoyment is as an attitude that allows researchers to “broaden our understanding

not only of the precursors of enjoyment but its behavioral outcomes as well” (Nabi and Kremer, 2004, p. 292).

Attitudes and Behavior in Customized Online Environments

A consumer’s attitude can best be described as a positive or negative disposition toward a given object, person, or event. The study of attitude and attitude change has long been a vital component of advertising research as consumer attitudes are considered to be a direct pre-condition, or antecedent, to consumer behavior. Over the last century, the study of attitudes has evolved from the initial theories of Hovland, et al. (1953), Festinger (1957), Abelson (1957), and Heider (1959) to a robust set of theories and models that predict attitude change based upon dual processes and multiple routes to persuasion (Petty and Cacioppo 1983; Petty and Wegener, 1999; MacInnis and Jaworski, 1989). As such, attitudes are seen as derivatives of both personal (micro) and social (macro) factors that determine both how we react to persuasive messaging and integrate it into our lives (Pollay and Mittal, 1993).

A person’s attitude represents a psychological tendency that is expressed by evaluating a particular object and can serve various motivations (Eagly and Chaiken, 1993, p.479). Katz’s (1960) seminal work on functional theory is considered by many essential for understanding the complex motivational underpinnings and functions of attitudes. Functional theory states that attitudes may serve various motivations depending on the purpose and that one’s behavior is a function of their attitude toward that behavior (O’Keefe, 2002, p.29). The basis of this theory centralizes around the view that in order to impact behavior you must understand the motivational source of the attitude. For instance, a person’s willingness to interact with customized online media environments

using Web 2.0 technologies will be determined by his or her attitude toward such media exposure and level of perceived control. However, because people's motivations can vary greatly, consumers may decide to create and interact with customized media environments for different reasons.

Overall, functional theory has been widely accepted among theorists as a robust framework for recognizing the diverse motivational patterns of attitudes (Abelson & Prentice, 1989; Herek, 1987; Locander and Spivey, 1978). In particular, Katz's (1960) typology posits that any given attitude held by any given individual will serve one or more of four distinct personality functions: a utilitarian function, a knowledge function, an ego-defensive function, and a value-expressive function. The utilitarian function acknowledges that people are motivated to gain rewards and avoid punishment from their environment. Specifically, this function represents attitudes based on self-interest. In terms of self-defined media environments, consumers served by this motivational function would create such environments for personal incentives. In contrast, the knowledge function recognizes that people are driven by the need to gain information in order to organize and understand one's environment. We are motivated by the need to understand and make sense out of our experiences. Users of customized media environments served by this function would engage in such behaviors because it helps them understand their environment, the topic at hand, and/or ultimately themselves because they feel a sense of intrinsic wisdom. Subsequently, the value-expressive function is served by attitudes that allow individuals to express or relate with their self-concepts and values. This function is perceived as enhancing one's image in the eyes of the world through matching their moral beliefs. Thus, consumers of customized media

content motivated by this function would feel inherently gratified with self-esteem for creating content and being a member of an online community that shares the same principles they consider important. It validates and helps them feel good for who they are and what they believe about the world. Finally, the ego-defensive function represents motivations that are designed to protect people from internal insecurities or external threats. They serve the internal function of defending one's self-image. Consumers motivated by this function would participate in order to minimize their own self-doubts, to feel a sense of belonging, and possibly reduce guilty feelings of not contributing.

While these four functions remain the core constructs for understanding attitudinal motivations, contemporary researchers have continued to clarify and explore additional contributions. For instance, Smith (1973) proposed an extension of the value-expressive function focused on the motivation for social adjustment in expressing attitudes or behavior that are agreeable to others. The function has since evolved to include motivations concerning relationships with others and recognizes the distinction between internal beliefs and the desire for external relationships independent of moral values. In particular, this social function compels people to seek opportunities to be with friends or to participate in activities perceived favorably by important others (Clary, et. al. 1998). Within the realm of customized online media environments, the social function would be a strong motivator as the concepts of sharing and interacting socially are widespread. Creators of customized media environments would be motivated by this function because of how important reference groups would perceive their membership in such an online community. Even though each of the functional sources are capable of making independent motivational contributions to the formulation of one's attitude, the

theoretical assertion remains that attitude is served by a multitude of origins and more than likely driven by a combination of sources (Katz, 1960).

In the domain of advertising, much focus has been devoted to the investigation of how consumers react to commonplace types of advertising on the Web, ranging from banner ads to sponsorships, and pop-up ads. While dynamic and interactive advertisements were found to be more effective than static ads in producing positive consumer responses (Coyle and Thorson, 2001), recent research suggests that consumers' overall response to advertising on the Web is increasingly negative as they become more savvy and sceptical about the values of such advertisements (Cho and Cheon, 2004; Coutler et al., 2001). In fact, the online landscape has become congested with advertising in its more intrusive forms and consumers strive to avoid advertising as much as possible because such advertising is likely to interfere with the tasks or interests they are pursuing online (Cho and Cheon, 2004; Li, Edwards and Lee, 2002). Moreover, it has been shown that while Web searchers consider sponsored search advertising as less relevant than organic search results, they are essentially equally relevant (Jansen and Resnick, 2006). Taken together, the literature suggests that interactive advertising features that enhance consumers' understanding of relevance without actually interfering with their intended tasks should be successful in eliciting their favourable attitudes. Advertising via RSS feeds is an advertising medium that fits this description, and due to its informative and (mostly) non-intrusive nature is not likely to be perceived as annoying or irrelevant by users of customized media environments.

Among the variety of factors influencing consumer response to advertising on the Web, congruity between the ad and the website content in which the ad is placed appears

to be a significant factor in advertising perception (Cho, 2003; Moore, Stammerjohan and Coutler, 2005; Shamdasani, Stanaland and Tan, 2001). In Cho's (2003) study of banner ads, advertising content that was congruent with the editorial content was more effective as it was less likely to interrupt the consumer's primary task or focus. Similarly, the higher level of congruity between the product category advertised in a banner ad and the context of the website in which the ad was embedded resulted in more favorable consumer responses than low relevance between the ad and the website context (Moore, Stammerjohan and Coutler, 2005; Shamdasani, Stanaland and Tan, 2001). This bodes well for advertising via customized media environments because the ability to deliver highly customized and relevant content is inherent.

Alternatively, research by Li, et al. (2002) suggests that as online consumers become increasingly goal oriented, online advertising techniques that are interactive and non-congruent shall become substantially more intrusive because they will stand between consumers and their goal actualization. Their research identified three causes of ad irritation: (1) content, (2) execution, and (3) placement. Among these, ad placement online is considered to be the primary indicator as to whether an ad is considered intrusive or not. This focus on the location of an ad ties back to the previously discussed findings confirming that increased ad congruency in an online environment leads to a higher click through rate and more favorable consumer attitudes (Cho, 2003). Thus, content congruent advertising perceived as useful in this context should elicit less irritation amongst consumers upon exposure.

Taking the above findings into account, this study seeks to better understand how consumers react to customized online environments, and, in turn what impact that has on

their media enjoyment, attitudes toward advertising and behavioral intention for using customized online environments. As technology advances continue to open niche markets for interacting with online consumers, it is imperative to gain a more robust perspective of how consumers are interacting with advertising in this arena. More so than ever before, consumer attention is illusive and advertisers must be always mindful of effective methods for communicating their marketing messages. Customized online environments could provide a potentially effective outlet for reaching such consumers.

Summary

As media continue to adapt to the changing technology needs of today's consumers, it is imperative to gain insight into the effects of customization on media experiences. In using customization priming to manipulate exposure, while also taking into account information overload and desire for control, a clearer picture of how consumers interact with and exposure enjoyment from customized media environments will emerge. Current research in this area has focused primarily on content personalization and recommendation systems as they relate to user satisfaction. To further expand this research into the realm of Web 2.0 technologies, this study will examine how consumers interact with customized news environments online.

Chapter 3

Theoretical Framework

Given the novelty of Web 2.0 technologies and consumers ability to create customized media environments for a more focused media experience, it is necessary to gain an understanding of what impact the ability to control and customize such media environments has on a consumer's media experience. The expectancy value model (Fishbein, 1961, 1963) will be used to explore the impact of setting consumer expectations, via customization priming, and the preceding impact on media enjoyment, attitude toward advertising and behavioral intention.

The Expectancy-Value Model

Fishbein's expectancy-value model (1961, 1963) is predicated on the assumption that, when given a choice of behaviors, a consumer will choose the behavior that has the greatest potential reward associated with it. Basically, a consumer will evaluate a situation based upon their existing beliefs and values (expectations) and determine what course of action will bring them the most value. As such, consumers may choose technologies to interact with based upon the technology they feel will most meet their needs, and provide the largest reward. Indeed, Palmgreen (1984) indicates that consumers negotiate the world based upon their expectations and the perceived values they could potentially embody. As such, these beliefs and expectancies will guide the gratifications we seek as well as the media exposure we choose.

The expectancy-value model provides much of the explanatory power for the uses and gratifications concept proposed by Katz (1959). Consumers will choose media to

consume based upon how likely it is to gratify their most pressing motivational concern. Given the breadth of media exposure most consumers have, their expectations of need gratification will be based upon their existing beliefs and values associated with the media choices. Thus, a media choice will be made that accounts for both need fulfillment and gratification, or in this case overall enjoyment. Although the expectancy-value model adds explanatory power to the uses and gratifications approach, neither model takes into account consumer factors, such as desire for control.

The expectancy-value model could be used to change a consumer's behavior through advertising such that a certain behavior is imbued with more value than another, thus making the choice more logical for the consumer. Although it sounds simplistic, much of advertising is based upon providing unique selling propositions and arguments that ask the consumer to process information about brands that are virtually synonymous and make a choice based upon expected value. Thus, it is difficult to craft advertising messages that both stand out from the clutter as well as convince a consumer that a given product will deliver a better value than another similar source. In terms of self-defined media environments, much of the value tied to a given information provider lies in their credibility, usability and availability. In such a situation, consumers may choose an information or media provider based upon their capacity to deliver in terms of the above expectations. Consumers may choose an information source to add to their customized media environment that provides the most value in terms of up to date news, fresh content, a usable interface, and non-intrusive advertising.

In 1984, Palmgreen (1984) described a course of action related to the expectancy-value model that describes how our expectations relate to media consumption and the

fulfillment of sought after gratifications. In this model, a consumer begins with a set of current beliefs and expectations. These two factors help to shape the gratifications sought which in turn shapes the media exposure chosen by the consumer. Ultimately, gratifications are either obtained or not obtained and the attitudes and behavioral changes induced by media exposure are then re-integrated into the consumer's beliefs and expectancies for the next series of movements through the model. Palmgreen (1984) integrates several of the consumer factors into his model such that attitude change is incorporated into the mix, however a consumers beliefs and expectancies should be further parsed out to determine a true driving force behind them.

Ultimately, the expectancy-value model provides a minimalist framework for understanding how consumers choose actions and behaviors to pursue. Advertisers can work within this framework by providing advertising that promotes certain values above other brands in order to entice consumers; however, this could easily backfire if the product does not live up to the consumer's expectations. To effectively change behavior in consumers, advertisers must convey a value that is consistent with their target consumer and then deliver on that promise in order to reinforce the value of the brand. In order to become a more robust and predictive model, the expectancy-value framework must take additional consumer factors into account so that more meaning can be derived beyond the expectations and beliefs that are antecedent to obtaining value.

From a business perspective, the use of Web 2.0 technologies provide an outlet to communicate brand values and expectancies to consumers in a media environment which is controlled, personalized and relevant. Once consumers have elected to receive communications via Web 2.0 technologies, e.g. RSS feeds, from a given company, that

company has a unique opportunity to set brand and product expectations with the consumer's full permission (Godin, 1999). As such, customized media environments are powerful tools for interacting with consumers in a space where they are in control and focused on the information they are consuming. Could such a customized and controlled information space be able to create more positive attitudes within consumers?

Proposed Model of Customization Effects

As consumers gain an increasing amount of control over their media environment, it is inevitable that their exposure to and attention toward advertising will decrease. Advertising clutter has continued to increase in recent years, leading to consumers exhibiting more negative attitudes toward advertising and an increase in ad avoidance. A recent study by Elliot and Speck (1999) indicates that, among other media, television has the highest rate of perceived communication problems, including clutter, hindered search and disruption. These communications problems translated to a greater degree of ad annoyance as well as heightened ad avoidance amongst their consumer sample (Elliot and Speck, 1999). As consumer control increases, both via traditional media channels as well as within the interactive space, it is imperative to gain a greater understanding of how consumers use self-defined media environments as well as how they interact with advertising within them. This research seeks to provide a clearer understanding of how consumers are interacting with advertising in this ever-expanding media environment and the expected outcomes they seek from such experience. A basic model of how the proposed factors impact one another can be seen in Figure 2 below.

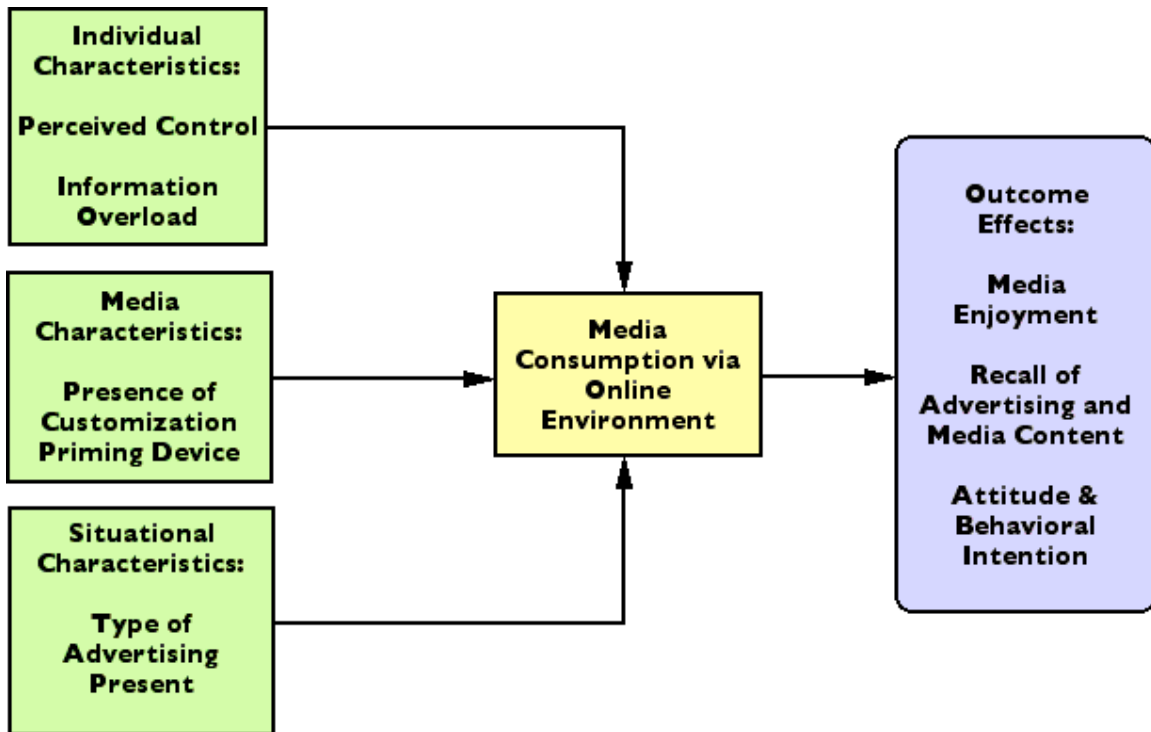


Figure 2: Proposed Model of Exposure Effects for Customized Web Environments

Hypotheses

Taking the above literature into account, several hypotheses can be tested concerning a consumer's interactions within customized online environments, including the proposed impact on perceived media enjoyment, attitude towards advertising, and behavioral intentions. As indicated in the literature, a consumer's desire for control and level of information overload can also impact the cognitive, affective and behavioral dimensions of their experience with media content. Due to their interactive nature, customized online media environments have the potential to increase media enjoyment by increasing perceived consumer control (Alpert, et al, 2003; Althaus and Tewksbury, 2000; Wu, 2006) as well as decreasing information overload (Hurst, 2008). Thus, consumers with a high desire for control should have positive feelings toward a media

environment that increases their feelings of perceived control, i.e. a customized online environment. However, those consumers with a low desire for control could potentially see a decrease in media enjoyment as media control increases due to the cognitive dissonance it could create.

H1: Consumers with a high desire for control will perceive greater media enjoyment when experiencing a customized media environment (high customization) versus a standard web environment (low customization).

H11: Consumers with a low desire for control will perceive greater media enjoyment when experiencing a standard web environment (low customization) than a customized media environment (high customization).

Additionally, a consumer's level of perceived information overload could potentially impact their experience with customized online environments. As shown by Liang, et al. (2007), personalized online services can reduce information overload and thus increase user satisfaction with effects typically moderated by a consumer's motivational underpinnings. Similar to personalized recommendation services, customized online environments have the capability to tailor information to a consumer's specifications and thus decrease information overload and increase media enjoyment.

H111: Consumers with a high level of information overload will perceive greater media enjoyment when experiencing a customized media environment (high customization) versus a standard web environment (low customization).

H1111: Consumers with a low level of information overload will not perceive a difference in media enjoyment when experiencing a standard web environment (low customization) or a customized media environment (high customization).

In addition to the media content consumers are exposed to through customized online environments, they are increasingly becoming exposed to advertising within these environments. As such, advertising can be characterized as another type of information that consumers will encounter when perusing customized media content. Banner ads, sponsorships, and links to advertiser websites can be found in increasing numbers within customized media environments, as well as being typically found within standard web environments such as corporate information and news sites (Ad Age, 2007). With advertising becoming more present in customized media environments, it is vital to gain insights to the effects such advertising has on consumers perceived media enjoyment.

While dynamic and interactive advertisements have been found to be more effective than static ads in producing positive consumer responses online (Coyle and Thorson, 2001), recent research suggests that consumers' overall response to advertising on the Web is increasingly negative as they become more savvy and skeptical about the values of such advertisements (Cho and Cheon, 2004; Coutler, et al., 2001). In fact, the online landscape has become congested with advertising in its more intrusive forms and consumers strive to avoid advertising as much as possible because such advertising is likely to interfere with the tasks or interests they are pursuing online (Cho and Cheon, 2004; Li, Edwards and Lee, 2002). Customized media environments offer consumers a new option for browsing online content designed to deliver content specifically tailored to the consumer's interests or desires. However, due to the lack of advertising in this medium to date, the presence of advertising is likely to decrease media enjoyment for some consumers as it can be characterized as a loss of control.

HV: Consumers with a high desire for control, who are exposed to a customized media environment (high customization), will have a more positive attitude toward advertising than high desire for control consumers who are exposed to advertising via standard web environments (low customization).

HVI: Consumers with a high desire for control who are exposed to keyword advertising (low intrusion) via a customized media environment (high customization) will have more positive attitudes toward advertising than those high control consumers who are exposed to banner advertising (high intrusion) via a customized media environment (high customization).

Based upon research conducted by Sicilia and Ruiz (2007), consumers experience an increase in their ability to process information when they are in a state of flow. In addition, Alpert, et al. (2003) speak to a consumer's desire for control and how it is a pivotal component of a consumer's media experience: "the clearest result to emerge from our studies is users' fervent desire to be in control" (Alpert, et al., 2003, p.385). As such, consumers with a high desire for control should enjoy a media environment with a high level of personalization and perceived control (i.e., a customized media environment). Sherry (2000) indicates that level of perceived flow impacts a consumer's media experience and that individual differences in cognitive abilities may have the ability to hamper the flow state.

Given this link, high control consumers navigating a customized media environment should feel satisfaction as they process information which they have self-selected according to their interests. If such a customized environment is successful in generating an enjoyable state, according to Sicilia and Ruiz (2000), consumers should

have increased information processing capabilities. According to LCM, this increase in information processing ability could lead to more resources being allocated to struggling sub-processes, thus resulting in greater recall of information (Lang, 2000). Alternatively, low control consumers may not respond accordingly to a highly customized media environment, instead feeling restrictions that impede their sense of enjoyment. While both high and low control consumers should experience greater recall when exposed to information through a customized media environment, simply due to the difference in elements to process, it is posited that a consumer who is high in control will respond more positively to the ability to customize and control their media content than a consumer who is low in desire for control.

HVII: Consumers with a high desire for control, who are exposed to a customized media environment (high customization), will have greater recall of media content as compared to exposure through a standard web environment (low customization).

HVIII: Consumers with a low desire for control, who are exposed to a customized media environment (high customization), will have decreased ability to recall media content as compared to low control consumers exposed to a standard web environment (low customization).

Advertising available through such media content feeds has the ability to, 1) be customized within a given news feed (keyword advertising), 2) come in the form of a product endorsement (sponsorship) or 3) a banner advertisement. The negative advertising effects of “banner blindness” continue to cast a light on their lack of effectiveness as a message delivery mechanism, techniques such as sponsored search, or

keyword advertising, and content sponsorships are becoming more popular avenues for reaching online consumers. As such, the availability of both types of advertising via RSS feeds warrants further investigation.

While the presence of advertising in RSS feeds is likely to cause decreased media enjoyment, due to intrusion, the type of advertising has the potential to make media enjoyment a more positive function. As consumers experience navigating a self-defined media environment, they are likely to feel interrupted by a banner ad that represents an abrupt change in the media environment. However, according to the LCM, if this banner ad is also relevant to the customer's needs, more information processing capacity will be allocated to it and potentially result in better encoding. Indeed, Godin (1999) indicates that if a consumer is exposed to a banner advertisement that is context relevant their media enjoyment experience may not feel as interrupted. Thus, holding ad relevance constant, a banner ad (high intrusion) should warrant greater click through intention when consumers are exposed to such advertising via a customized media environment (high customization) as compared to a standard web environment (low customization).

H1X: Consumers who are exposed to banner advertising (high intrusion) via a customized media environment (high customization) will have greater behavioral intention to click on the ad than those high control consumers who are exposed to banner advertising (high intrusion) via standard web environments (low customization).

While customized media environments present an arena for more focused and controlled information processing, the effects of advertising intrusion are still very real and must be considered in terms of what types of interactive advertising are most effective in terms of

ad recall. Consumers' persuasion knowledge with regard to advertising increases every time they have an online encounter with interactive advertising (Friestad and Wright, 1994). As such, many have learned to avoid online advertising, leading to effects of banner blindness. It is in this sea of interactive advertising clutter that static, text-based ads are beginning to stand out because of their high relevance and minimal intrusion. While a sponsored search, or keyword ad doesn't have the impact of introducing an abrupt change in the media environment, it does present a relevant piece of information in a context that does not interrupt the information flow of other content (Lang, 2000).

HX: Consumers with a high desire for control who are exposed to keyword advertising (low intrusion) via a customized media environment (high customization) will have greater behavioral intention to click on the ad than high control consumers who are exposed to banner advertising (high intrusion) via a customized media environment (high customization).

In sum, customized media environments are seen as a place where consumers can experience high levels of media enjoyment while also being exposed to relevant advertising content in a context with fewer bits of information to process. As such, they represent potentially powerful conduits for interacting with consumers in a time and place that is most relevant to them. The following chapter provides details on the experiment devised to test the hypotheses delineated above.

Chapter 4

Research Methodology

In order to investigate the effects of customization priming within the realm of online experiences, the impact of customization priming will be examined across the affective, cognitive, and behavioral domains. Given the continued growth of media markets that promote consumer control, this study seeks to contribute to the existing literature on customized media environments as well as provide insight into consumers' reactions to advertising in such online environments. This chapter delineates the research methodology used to test the proposed hypotheses, including the experimental design and procedure, the variables of interest, as well as details concerning the stimuli and sample used during the research.

Experiment Design

Given the proposed hypotheses, a between subjects design was used with the type of customization priming (no priming / customization priming) alternated across three types of advertising exposure (no ad / banner ad / keyword ad) resulting in a total of 6 experiment conditions. In order to measure consumers' response across cognitive, affective and behavioral dimensions, the dependent variables of interest included media enjoyment, unaided and aided recall of media content, and behavioral intention for use of customized online environments and for interacting with online advertising (i.e. clicking on the ad). With its focus on interactive media environments and a consumer's reaction to advertising therein, this study required the use of both traditional advertising measures (i.e., attitude toward the ad, recall) as well as non-traditional measures to correspond with

the medium used (i.e., media enjoyment, behavioral intention to use online environments) (Bruner, et al., 2001; Locander and Spivey, 1978). In addition to the manipulated independent variables, several individual difference measures were collected to serve as potential covariates, including desirability of control (Burger and Cooper, 1979), internet self-efficacy (Eastin, 2005), locus of control (Rotter, 1966) and information overload (Bruner, et al., 2001).

The exploratory nature of this investigation fits well with several different research methodologies, including usability testing and online surveying; however, an experiment was chosen in order to provide the greatest amount of control and explanatory power. Because several independent variables are being manipulated for the experiment, a between subjects design was chosen to best isolate the variables of interest. In choosing this design, a clearer picture of actual treatment effects has the potential to emerge.

Participants

A total sample of 252 undergraduate students from a large Southwestern university participated in the experiment. Students were recruited from several undergraduate level courses during the Spring, Summer and Fall semesters of the 2007-2008 and 2008-2009 academic years. The recruiting of subjects occurred across three semesters to accommodate three stages of data collection, including two web-based pre-test questionnaires (April 21st – 29th, 2008), a manipulation check of the customization priming conditions (May 4th – 17th, 2008), and the laboratory data collection (June 18th – July 11th, 2008 / July 21st – August 12th, 2008 / September 3rd – 10th, 2008). Of the 252 cases collected during the laboratory experiment sessions, 237 represented valid cases used for this analysis. The 15 invalid cases included those participants who either a) did

not complete the pre-test questionnaire but completed the experiment, b) completed the pre-test but did not complete the experiment, or c) only completed a portion of the pre-test and did not show up for the experiment. The convenience sample used does inhibit external validity, however, in using a student sample differences in individual characteristics should be minimized due to the relative homogeneous nature of student demographics. Additionally, the randomization of subjects across experiment conditions should normalize individual variation across the subject specific independent variables of interest (i.e. control factors, internet self-efficacy, and information overload). Finally, according to recent reports (Verna, 2006), consumers who are engaging with Web 2.0 technologies, such as customized online environments, tend to belong to younger age groups (18 – 35) as well as being technology savvy. Today's undergraduate students closely map to the above demographic criteria and therefore make suitable candidates for examining the impact of customization priming on the cognitive, affective and behavioral experiences consumers have while navigating such online environments.

Independent Variables

The two main independent variables manipulated for the experiment were 1) presence of customization priming (no priming / priming) and 2) type of advertising exposure (no ads / banner ad / keyword ad). In order to further isolate the treatment effects, desirability of control, Internet self-efficacy and information overload were measured as potential covariates. The pairing of customization priming and type of advertising exposure was essential in order to see the impact of exposure to customized online environments across the various types of interactive advertising currently deliverable via customized online media channels (i.e., news feeds, blogs, etc.).

Exposing subjects to a customization form that inquired about a subject's current college major, their age, and a ranking system for their current top three news categories manipulated the level of customization present in the online environment. For example, subjects in the customization priming conditions were instructed to complete a customization form after which they were provided with a link to their customized online environment. Subjects who did not receive customization priming were simply given instructions to review the online environment provided to them by the researcher. While all subjects were exposed to identical media content, the type of advertising present was manipulated by providing one of the following types of advertising at the end of the first of three articles, 1) a banner ad, 2) a keyword ad or 3) no advertising (control condition). The type of product used in the advertising was determined by a pre-test questionnaire administered prior to stimuli construction. The pre-test indicated that the technology product category was most important to undergraduate students, and within this category, personal computers were of the utmost interest. A complete delineation of the experiment procedure is provided later in the chapter.

Stimulus

In order to simulate the experience of reading online news content through a news feed aggregator (i.e., Bloglines, NetNewsWire or Google Reader), while still maintaining the greatest degree of control over the order of exposure to news content, a total of twelve online environments were created using the web-based blog creation software available through Blogger.com. Each of the twelve online environments featured three news articles and, in some cases, displayed either a keyword ad or a banner ad immediately

following the first news article (See Appendix D). The following is an example of one of the online news environment used as experiment stimuli:

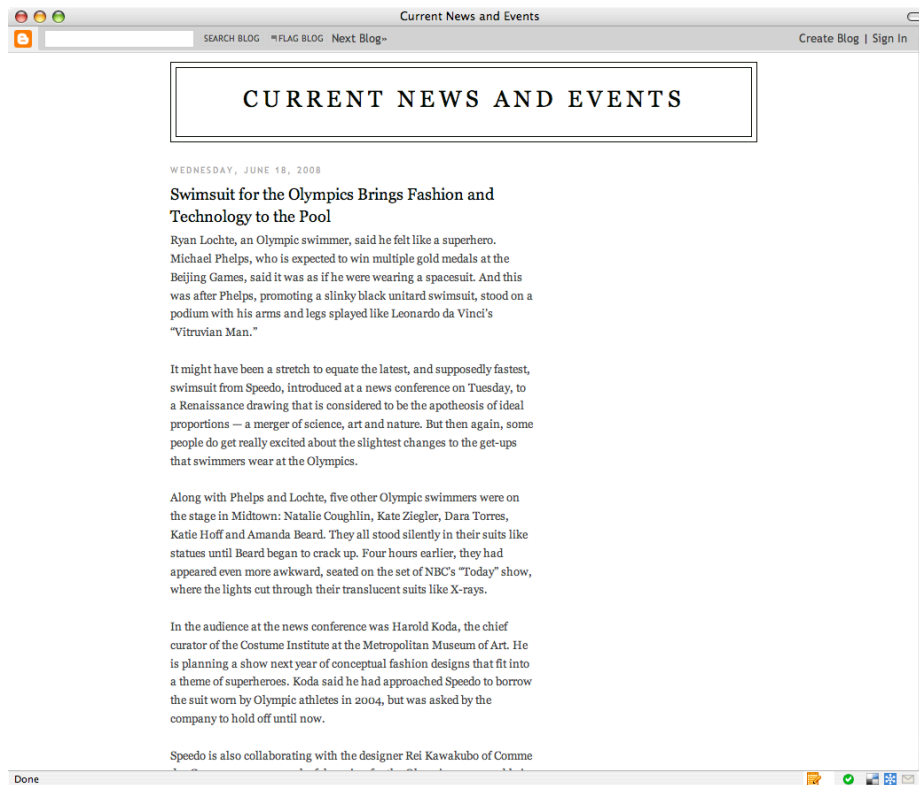


Figure 3: Screenshot of Experiment Stimuli with No Advertising

In order to provide the most relevant news category choices on the customization form provided to subjects in the customization priming conditions, a pre-test was conducted on a convenience sample of 145 undergraduate students during the Spring 2008 semester ($n = 112$). The pre-test questionnaire required students to rank order their top four most important news categories (i.e. the areas of the news that you tend to pay attention to the most during a typical day) as well as their top four most important product categories (i.e. the product categories that you tend to pay the most attention to during a typical day). The news category choices provided in the pre-test were a

standardized set of items available through both the New York Times and Washington Post websites. These items included, 1) arts and leisure, 2) books, 3) business, 4) dining and wine, 5) opinion / editorial, 6) education, 7) fashion and style, 8) health, 9) home and garden, 10) movies, 11) politics, 12) real estate, 13) regional news, 14) sports, 15) technology, 16) theater, 17) travel, 18) United States News, and 19) world news. The majority of respondents indicated sports as the most important news category to them (n = 29 / 25.9%), followed by fashion and style (n = 13 / 11.6%) and technology (n = 11 / 9.8%). The least important news categories, amongst the convenience sample, were dining and wine, editorial / opinion, home and garden, and theater (in all cases, n = 0).

To determine what types of products should be featured in the advertising developed for inclusion in the stimulus, in the same pre-test, students were asked to rank their top four most important product categories amongst the following choices: 1) apparel, shoes and jewelry, 2) books, 3) digital downloads, 4) electronics and computers, 5) games, 6) grocery and cooking, 7) health and beauty, 8) home and garden, 9) fitness, 10) kids and baby, 11) movies, 12) music, 13) sport and outdoors, 14) tools, auto and industrial, and 15) toys. The product category choices were determined by evaluating large online retail websites, such as Amazon.com, Target.com and Walmart.com to create a standard list of available product categories at a typical retail outlet. The majority of respondents indicated that electronics and computers ranked as the most important product category (n = 28 / 25%), followed by apparel, shoes and jewelry (n = 23 / 20.5%) and music (n = 16 / 14.3%). The least important product categories were home and garden (n = 1 / 0.9%), tools, auto and industrial products (n = 1 / 0.9%), and kids / baby products (n = 0). The demographic profile of the pre-test convenience sample is as

follows: 1) 64.3% Male / 35.7% Female, 2) 33% sophomores, 23.3% freshman, 19.6% seniors, 15.2% juniors, and 3) all respondents belonged to the 18 - 24 years age group.

To obtain greater granularity in terms of the types of physical products undergraduate students preferred within the electronics and computers category, a second pre-test was conducted on the same population to determine the most relevant type of electronics product to feature in the advertising presented in the experiment stimulus. The second pre-test (n = 113) revealed that computers and PC hardware (n = 33 / 28.9%) were the most important type of products within the electronics and computers product category, amongst this sample of undergraduate students. After computers and PC hardware, audio, television and home theater products ranked second in importance (n = 25 / 21.9%) followed by a third place tie for video games (n = 18 / 15.8%) and cell phones and service (n = 18 / 15.8%). The least important electronics and computer products, as rated by this sample of undergraduate students, are software (n = 3 / 2.6%), GPS (n = 0) and office products (n = 0). The demographic profile of the second pre-test sample varied slightly from the first pre-test group: 1) 66.7% Male / 33.3% Female, 2) 34.2% sophomores, 23.7% freshman, 15.8% seniors, 14.9% juniors, and 3) all respondents belonged to the 18 – 24 years age group. Finally, in order to facilitate the manipulation checks needed for the customization conditions, subjects taking the second pre-test were also asked to provide their current age as well as their classification and college affiliation at UT Austin. As such, the survey form used for this pre-test mapped closely to the form used in the experimental stimulus.

Based on the data gathered in the pre-tests, twelve online news environments were developed such that three online environments existed for the subjects who did not

receive customization priming (no advertising / with banner advertising / with keyword advertising) and nine online environment variations existed for those subjects who received customization priming - 3 variants of advertising (no advertising / with banner advertising / with keyword advertising) across 3 possible news category choices (Sports, Fashion & Style, and Technology). Each online environment featured, 1) a title bar at the top of the page, 2) three news articles with each containing a distinctive headline and roughly 500 words of text, and 3) either keyword or banner advertising if applicable. Care was taken to develop the online environments in such a way that a maximum level of control was achieved while still providing content that was relevant across the three “most important” news categories identified during the pre-test.

The articles featured in the online news environments were obtained via the New York Times, Washington Post and Austin American-Statesman newspaper websites between June 1st and June 15th, 2008. To isolate the customization component of the experiment, it was necessary to provide identical news content across all conditions thereby eliminating any difference in exposure to news content. However, the content simultaneously had to appear to be “customized” for those subjects assigned to conditions with customization priming. Therefore, the news content chosen had roughly equal amounts of information about the top three news categories identified during the first pre-test (Sports, Technology, Fashion & Style). The test article available in the online environments featured all three necessary news categories as it related to the new technologies available for Olympic athletes, specifically the fashionable new swimwear developed for this years Olympians (For full article text, see Appendix G). In providing a test article that included elements of each relevant news category, subjects in the

customization conditions have the potential to feel as though they are reviewing a customized environment regardless of which news category they choose as most important. All three articles provided were between 500 to 600 words and were edited from their original versions to be of relative equal length.

Lastly, two advertisements were developed to feature alongside the news content in the test article. Based on the pre-test, computers and PC hardware were considered the most important product to undergraduates; therefore, a banner ad and keyword ad that featured this type of product were designed. The level of advertising relevance is not a variable of utmost interest for this study, therefore the ads developed for this experiment focused on products deemed highly relevant to undergraduates, as opposed to developing a variety of ads with varying degrees of product relevance. In addition, to avoid previous exposure impacts, a fictitious product name, “Synergy Computers”, was featured in the advertising. Both the keyword and banner ad featured identical text content, however, the banner ad depicted a graphic of the Synergy logo while the keyword ad only had text.



Figure 4: Advertisements Used in Experiment Stimuli

Both ads conform to industry standard measurements (i.e. Interactive Marketing Units – IMUs) established by the Interactive Advertising Bureau for both banner advertisements and keyword advertisements (IAB, 2008). As dynamic, interactive content cannot yet be delivered to consumers via RSS feeds, due to technology limitations, the advertisements

used did not have any animation or embedded video in order to best reflect the types of advertising currently available through this technology (i.e. basic online advertising).

Procedure

Subjects were recruited from a variety of undergraduate courses in the College of Communication and School of Information, including courses in Advertising, Media Studies, and Journalism. The recruitment of subjects took place between June 1st and September 5th, 2008. In some cases, subjects received extra credit for their participation in the experiment as well as being entered into a prize drawing for a \$150 cash prize. During recruitment, subjects were told that the purpose of the study was to investigate online news environments and obtain their opinions and attitude with regard to such environments. Subjects were informed that the investigator was interested in the effectiveness of interactive advertising and how this relates to new types of media content, including content delivered via customized channels such as news feeds. Finally, subjects were instructed to sign up for a study timeslot and provide their email on the sign-up sheets provided in order to receive the pre-experiment questionnaire (See Appendix B) and further information about the experiment prior to their session. The following email was distributed to the recruited students twenty-four hours before their experiment session:

“Hello,

This is a reminder that you are currently signed up to complete an experiment tomorrow (insert appropriate date here) in the Media Lab in CMA 6.102 at (insert appropriate time here).

Before you arrive, please take a few moments to complete the pre-survey:

http://www.surveymonkey.com/s.aspx?sm=I6KaId4UeKktq1aM_2fALBbw_3d_3d

Thanks and I look forward to seeing you tomorrow!

Laura Bright”

The pre-test questionnaire consisted of 107 items, including a variety of scales that measured the individual differences of the study participants. The various individual difference variables collected included, but were not limited to: 1) desirability of control (Burger and Cooper, 1979), 2) social connectedness (Bruner, et al., 2001), 3) need for cognition (Caccioppo, et al., 1984), 4) internet self-efficacy (Eastin, 2005), 5) locus of control (Rotter, 1966), 6) information seeking efficacy (Eastin, 2005), and 7) information overload (Bruner, et al., 2001). Furthermore, subjects were asked to provide daily usage estimates (in hours and minutes for a typical day) for the following media: television, newspapers, radio, magazines, Internet, consumer-generated content (i.e. YouTube, blogs, Wikipedia, podcasts), RSS news feeds, chat applications (i.e., AOL instant messenger or iChat), text messaging via cell phone or personal digital assistant (PDA), and email. Lastly, subjects were asked to provide their email address in order to match their experiment and pre-test questionnaire responses. A variety of questions were posed to the subjects in order to mask the intentions of the study; for example, no advertising related questions were asked during the pre-test questionnaire to avoid priming subjects with regard to interactive advertising. The pre-test survey took approximately 15 to 20 minutes for subjects to complete.

Depending upon their date and time of arrival, subjects were assigned randomly to one of the following six conditions:

1. Evaluation of an online media environment with no advertising present
2. Evaluation of an online media environment with a banner ad present

3. Evaluation of an online media environment with a keyword ad present
4. Customization priming followed by an evaluation of a media environment with no advertising present
5. Customization priming followed by an evaluation of a media environment with a banner ad present
6. Customization priming followed by an evaluation of a media environment with a keyword ad present

Following condition assignment, the subjects were asked to complete an experiment consent form (See Appendix H) and the researcher confirmed completion of the pre-test questionnaire. After completion of the consent form, subjects were escorted to one of eight laboratory cubicles equipped with a 17-inch flat screen monitor and personal computer. The researcher then instructed the subjects to follow the instructions provided on the web page displayed via the Firefox web browser. In addition, the researcher explained that Firefox would open a new browser tab when subjects clicked on the web link provided. Subjects were instructed to review the news environment in the new tab and simply close the tab containing the online news environment when finished. This action automatically reverted the browser to the web page containing a prompt for subjects to proceed to the post-test questionnaire (See Appendix E) thus insuring that subjects would not refer back to the stimulus when responding to the recall questions in post-test questionnaire. Those subjects assigned to a condition that did not receive customization priming received the following instructions via the web page:

“Thank you for completing Part I of this research before arriving!

Now, we would like you to navigate an online environment for the next 5 minutes followed by a brief questionnaire about your experience.

While navigating the online environment, it is mandatory that you read the first article on the page. You will be asked a series of questions regarding this article, so please read it carefully.

Please click on the link below to proceed to the online environment:

CLICK HERE TO BEGIN YOUR REVIEW!

Once you have reviewed the environment, click the link below to proceed to the questionnaire.”

When subjects clicked on the link to review the stimulus they arrived at one of three websites containing the news content to be reviewed: 1) an online environment with no advertising, 2) an online environment with a banner ad, and 3) an online environment with a keyword ad (See Appendix D). The subjects who received customization priming received the following instructions via the web page at their stations:

“Thank you for completing Part I of this research before arriving!

Now, we would like to create a customized online environment for you to browse.

While navigating the online environment, it is mandatory that you read the first article on the page. You will be asked a series of questions regarding this article, so please read it carefully.

As soon as you are ready, please answer the questions below so that we may create your customized environment for you.”

Following the introduction, subjects were prompted with a customization form that included five questions that queried subjects about their top three most important news categories (on the day of the experiment), current classification at UT Austin (i.e., freshman, sophomore, junior, senior, 5th year senior, graduate level), and their college affiliation at UT Austin. Once subjects had completed the customization form by clicking the ‘Next’ button, the following instructions were provided:

“Thank you for electing your customization choices!

Now, please click on the link below to review the customized online environment we have created specifically for you.

Please review your customized environment for at least 5 minutes as you complete your task. Don't forget, it is mandatory for you to read the first article!

CLICK HERE FOR YOUR CUSTOMIZED WEBSITE!

When you are done, simply close the window and come back to this page to complete the remainder of the questionnaire.”

At this point, as with the previous conditions, subjects were directed to one of three online news environments containing no advertising, a banner ad, or a keyword ad alongside the content. The news content was identical across all conditions, regardless of the customization choices elected by experiment subjects.

Following the review of the online news environment, subjects were asked to complete a 98 item post-test questionnaire that measured the cognitive, affective and behavioral components of each subjects experience with the online environment. Specifically, the questionnaire queried subjects about their 1) level of media enjoyment, 2) general attitude toward advertising, 3) attitude toward the online environment, 4) attitude toward the act of navigating the online environment, 5) unaided recall of media and advertising content, 6) aided recall of media and advertising content, 7) attitude toward customization of online environments, 8) attitude toward the ad, 9) general attitude toward information aggregators, 10) behavioral intention for use of customized online environments, and 11) behavioral intention for clicking on the advertising (Bruner, et al., 2000; Bruner, et al., 2001). In addition, a series of demographic questions were asked, including age group, gender, income level, ethnicity, as well as current college affiliation and classification at UT Austin. Finally, subjects were debriefed about the

experiment and allowed to ask any questions or make comments following the completion of the post-test questionnaire. At this point, subjects were also provided with a copy of their written consent form if they requested one.

Dependent Variables

The dependent variables for this study (media enjoyment, recall, and behavioral intention) were measured using the aforementioned post-test questionnaire across a variety of validated question scales, which included semantic differential items, Likert type items, and open-ended text response items (See Appendix E). Additional exploratory items were included in the post-test questionnaire.

Following their exposure to the experiment stimuli, subject's self-reported their level of media enjoyment on an established eight-item scale (Bruner, et al., 2001). Specifically, subjects were asked to respond to the phrase "The online environment I just reviewed ..." as it related to a series of adjective pairs, on a seven- point scale. The adjective pairs included: 1) displeased me very much / pleased me very much, 2) disgusted me very much / made me very content, 3) did a very poor job for me / did a very good job for me, 4) was a very poor choice / was a very good choice, 5) made me very unhappy / made me very happy, 6) had a very bad value / had a very good value, 7) very frustrating / very enjoyable, and 8) very unfavorable / very favorable. All items from the scale were included in the analysis.

Recall of advertising and media content was measured using a series of open-ended response questions to gauge unaided recall for eight pieces of information

available in the test news article. Subjects were asked to provide 1) a brief summary or headline from the news content in the online environment, 2) names of any brands they remember seeing alongside the media content, 3) the brand of the online environment, 4) the brand of the swimsuit featured in the article, 5) the name of one of the Olympic athletes featured in the article, 6) the designer of the swimsuit featured in the article, 7) the name of the morning news show featured in the article, and 8) the type of women's clothing item the new Olympic swimsuits was compared to in the article. Similarly, aided recall was measured using the same eight questions, however responses were provided to the question in a multiple choice format, with a single answer per question. For example, for the aided recall question regarding the type of women's clothing item the Olympic swimsuit was compared to in the test article, subject's were required to choose either, a) leggings, b) pantyhose, c) a t-shirt, d) a camisole, or e) none of the above (See Appendix E for a complete list of choices for all questions). Data for recall scores was coded for correctness and then summed to create total recall scores for both unaided and aided recall.

In advertising and consumer behavior research, behavioral intention is a common measure used to gauge effectiveness. With regard to future use of customized online environments as well as potential engagement with advertising (i.e. clicking on the ad), a subject's behavioral intention was measured on an established six point semantic differential scale (Bruner, 1998). Subjects were instructed to rate the probability of future engagement with customized online news environment using the following adjective pairs: 1) unlikely / likely, 2) non-existent / existent, 3) improbable / probable, 4) impossible / possible, 5) uncertain / certain, and 6) definitely would not use / definitely

would use. On a separate survey page, the same series of items was used by subjects to rate their likelihood of engaging with the advertising present in the online environment.

Manipulation Check

To determine whether or not subjects reported an actual difference in level of customization perceived between the conditions that received customization priming and those that did not receive priming, an independent samples t-test was run with degree of customization as the dependent variable. The two groups tested were, 1) subjects who received customization priming (N=118) and 2) subjects who did not receive customization priming (N=119). The t-value indicates that the mean difference between groups is statistically significant, as predicted, $t(235) = 3.15$, $p < .01$, $\eta^2 = .04$. This indicates that subjects exposed to customization priming were more likely to indicate experiencing a customized online environment than those subjects who did not receive customization priming.

Chapter 5

Analysis and Results

Sample

Subjects for this experimental research were recruited from a variety of introductory level, undergraduate courses at a large Southwestern university ($n = 237$). The sample consisted of 174 women (73%) and 63 men (27%) with the majority of respondents belonging to the 18 – 25 age group (94%). The remaining 6% of the sample was between the ages of 26 – 55 years old. In terms of ethnicity, the majority of the sample was Caucasian ($n = 159$, 67%) followed by Hispanics ($n = 32$, 14%), Asian Americans ($n = 21$, 9%), and African Americans ($n = 14$, 6%). Eighty-eight percent of subjects had an income totaling less than \$20,000 per year. In terms of class rank, the majority of the sample was upperclassmen with 58% seniors ($n = 137$), 13% juniors ($n = 31$), 13% freshman ($n = 30$), 11% fifth year seniors ($n = 25$), 5% graduate students ($n = 12$) and 1% sophomores ($n = 2$). Lastly, the sample was distributed across a variety of college majors, however the majority of the sample was students from the College of Communication (80% / $n = 189$). The remainder of the sample was distributed across Liberal Arts (13% / $n = 31$), Natural Sciences (3% / $n = 6$), Business (2% / $n = 4$), Fine Arts (1% / $n = 3$) and undeclared majors (2% / $n = 4$).

A series of individual difference measures were collected in the pre-test questionnaire that served as independent variables in the analysis, including a 20 item desire for control index ($M=4.94$, $SD=0.51$, $\alpha=0.80$) (Burger and Cooper, 1979) and a 6 item information overload index ($M=3.34$, $SD=0.91$, $\alpha=0.75$), with all items being

measured on a 7 point scale. Composite measures were constructed for each of the scales to represent the multiple items as well as to reduce measurement error in the subsequent analysis. All of the scales underwent a reliability analysis using Cronbach's Alpha with all scales exceeding the general acceptability guideline of 0.70 (Hair, et al., 1998). (See Table 1) Following the composition of the information overload and desire for control scales, dichotomous variables were created to split both groups into high and low categories. A median split was used to create high and low categories for desire for control (median=94.0) and information overload (median=20). Following the creation of dichotomous variables, there were a total of 108 subjects in the low desire for control group (46%) and 129 subjects in the high desire for control group (54%), respectively. For information overload, 118 subjects were classified as having a low level of information overload (50%), while 119 subjects exhibited a high level of information overload (50%).

In the post-test questionnaire, a series of dependent measures were collected, including media enjoyment, recall of media content, attitude toward advertising and customized online environments, as well as behavioral intention for use of customized online environments and interaction with advertising (i.e., clicking on the ad). As with the independent measures, composite measures were created and all scales underwent reliability analysis using Cronbach's Alpha. Results of the media enjoyment measure show that overall participants had a relatively high level of media enjoyment ($M=4.70$, $SD=0.87$, $\alpha=0.92$) after they were exposed to the experimental stimuli. Subjects scored moderately in terms of recall, with aided recall scores ($M=6.38$, $SD=1.12$) being slightly higher than unaided recall scores ($M=5.16$, $SD=1.44$). In terms of attitude toward the

online environment, subjects indicated a somewhat neutral attitude ($M=3.51$, $SD=0.86$, $\alpha=0.87$), however, their behavioral intention for use of customized online environments was slightly more favorable ($M=4.81$, $SD=1.29$, $\alpha=0.96$). With regard to the advertising based measures, only those subjects who were exposed to interactive advertising were included in the analysis ($N=158$). For those subjects exposed to advertising, the general attitude toward advertising was poor ($M=3.06$, $SD=1.02$) as well as the behavioral intention for clicking on the ad ($M=2.41$, $SD=1.17$). (See Table 1)

Table 1: Mean, Standard Deviation, and Cronbach’s Alpha Coefficients For Scales

Independent Measures	Mean	SD	Reliability
Desire for Control	4.94	0.51	0.80
Information Overload	3.34	0.91	0.75
Dependent Measures			
Unaided Recall	5.16	1.12	
Aided Recall	6.38	1.44	
Media Enjoyment	4.70	0.87	0.92
Attitude Toward Advertising	3.06	1.02	0.92
Attitude Toward Customization	3.51	0.86	0.87
Behavioral Intention for Customization	4.81	1.29	0.96
Behavioral Intention for Advertising	2.41	1.17	0.94

To insure the validity of univariate statistical tests, such as those conducted herein, the dependent variables must meet several criteria, including 1) independent observations, 2) normal distribution of variables, and 3) homogeneity of variances (HOV) (Howell, 2002). The first assumption was met by the random assignment of subjects into one of six experiment conditions. Thus, the low customization conditions with advertising (banner and keyword conditions) as well as the high customization condition without advertising all contained forty subjects, while the low customization condition

with no advertising and the high customization conditions with advertising contained thirty-nine conditions, respectively (See Table 2).

Table 2: Distribution of Subjects by Experiment Condition

Condition	N	Percent
No Customization w / No Ad	39	16.5
No Customization w/ Banner Ad	40	16.9
No Customization w/ Keyword Ad	40	16.9
Customization w/ No Ad	40	16.9
Customization w/ Banner Ad	39	16.5
Customization w/ Keyword Ad	39	16.5
Total	237	100

To determine that all variables indeed have normal distributions, all dependent variables were evaluated for skewness. The media enjoyment index was negatively skewed to a minimal degree (skewness = -0.29). The index created for behavioral intention for use of customized online environments was also negatively skewed (skewness = -0.54) as well as the aided recall score (skewness = -0.29). However, the unaided recall score was normal (skewness = 0.03). To evaluate the normality of the advertising based indices, only those subjects who were exposed to advertising were included in the analysis for both attitude toward advertising and behavioral intention. In terms of attitude toward advertising, the index had a slight negative skewing (skewness = -0.04); however, the behavioral intention for interacting with advertising was positively skewed (skewness = 0.98). Given that no skewness scores were in excess of +1.0 or -1.0, it can be confirmed that the data are normally distributed (Leech, Barrett and Morgan, 2008).

To insure that this univariate analysis is robust to violations of HOV, Levene's Test of Equality of Error Variances was conducted on the four dependent variables of

interest, including media enjoyment, attitude toward advertising, and behavioral intention for use of advertising. The results of the Levene's test indicate that there are no significant differences of variance for media enjoyment ($F(1,235) = 0.27, p > .05$), attitude toward advertising ($F(1,156) = 0.26, p > .05$), unaided recall ($F(3,233)=1.78, p > .05$), aided recall ($F(3,233)=0.80, p > .05$) and behavioral intention for use of advertising ($F(1,156) = 2.26, p > .05$). Therefore, along with the first two assumptions, the HOV assumption was not violated (Grimm and Yarnold, 1995).

Hypothesis Testing

To test HI and HII, an analysis of variance was conducted with the level of media enjoyment as the dependent variable, while accounting for each subject's desire for control. A 2 (customization vs. no customization) by 2 (desire for control: high vs. low) between subjects ANOVA on the media enjoyment scores revealed a main effect for level of customization, $F(3,233) = 3.70, p < .05, R^2 = .02$; however, a main effect was not indicated for desire for control, $F(3,233) = 0.92, p > .05, R^2 = .00$, nor was an interaction effect detected between desire for control and type of customization, $F(3,233) = 0.01, p > .05, R^2 = .00$. Those subjects who were given the choice to customize their online environments ($M=4.81, SD=0.86$) experienced greater media enjoyment than those subjects who did not receive the option to customize ($M=4.60, SD=0.85$).

Table 3: ANOVA Source Table for Hypothesis I and II (DV: Media Enjoyment)

Source	SS	df	MS	F	p
(AB Cells)	220.67	1			
Customization (A)	174.52	1	174.52	3.71	<.05
Desire for Control (B)	43.46	1	43.47	0.92	0.33
Customization x Control (AxB)	0.38	1	0.38	0.01	0.93
Error	10981.31	233	47.13		
Total	11201.98	237			

Therefore, Hypotheses I and II are partially confirmed. Figure 5 illustrates the interaction effects that occurred when examining the impacts on media enjoyment.

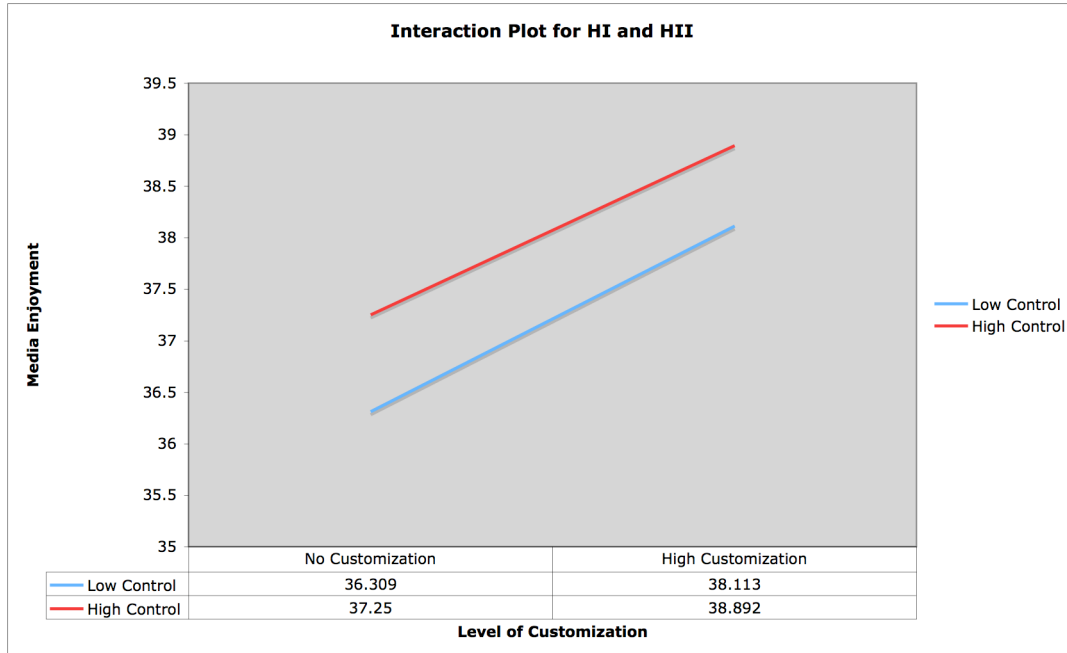


Figure 5: ANOVA Interaction Plot for Hypotheses I and II

The next series of hypotheses concern how a subject's level of information overload (high vs. low) interacts with level of customization (high vs. low) to impact perceived media enjoyment. A 2 (customization vs. no customization) by 2 (information overload: high vs. low) between subjects ANOVA on the media enjoyment scores revealed a main effect for level of customization, $F(3,233) = 3.76, p < .05, R^2 = .018$; however, a main effect was not revealed for desire for control, $F(3,233) = 0.03, p > .05, R^2 = .00$, nor was an interaction effect detected between information overload X customization, $F(3,233) = 0.49, p > .05, R^2 = .002$.

Table 4: ANOVA Source Table for Hypothesis III and IV (DV: Media Enjoyment)

Source	SS	df	MS	F	p
(AB Cells)	201.33	1			
Customization (A)	177.42	1	177.42	3.76	<.05
Information Overload (B)	1.34	1	1.35	0.03	0.87
Customization x Information Overload (AxB)	23.18	1	23.18	0.49	0.48
Error	11000.65	233	47.21		
Total	11201.98	237			

Thus, regardless of their degree of information overload, subjects perceived greater media enjoyment dependent upon their exposure to customization. Those subjects who were given the choice to customize their online environments (M=4.81, SD=0.86) experienced greater media enjoyment than those subjects who did not receive the option to customize (M=4.60, SD=0.85). Therefore, Hypothesis III and IV are partially confirmed. Figure 6 identifies the interaction effects for this analysis.

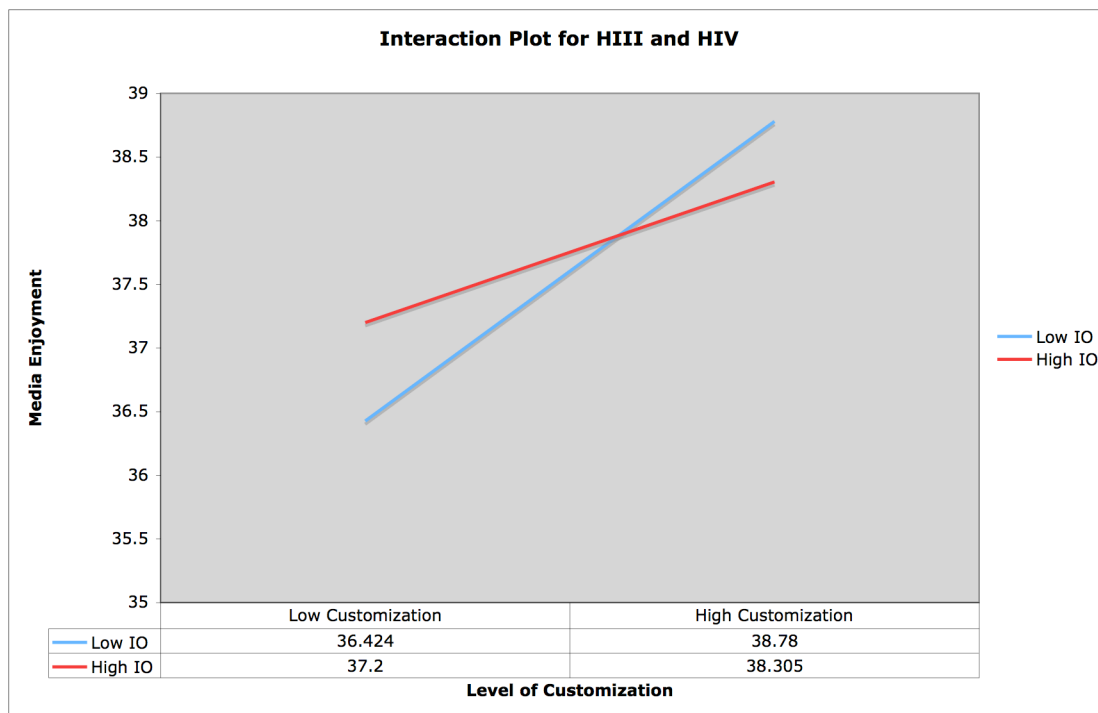


Figure 6: ANOVA Interaction Plot for Hypotheses III and IV

Hypothesis V and VI concern attitude toward advertising and thus only subjects who were exposed to advertising (banner ad or keyword ad) were included in the analysis (N=158). To test the hypothesis, a 2 (customization vs. no customization) by 2 (desire for control: high vs. low) by 2 (type of advertising: banner vs. keyword) between subjects ANOVA revealed a main effect for type of advertising present, $F(7,150) = 5.99, p < .05, R^2 = .05$; however, a main effect was not detected for level of customization, $F(3,233) = 0.06, p > .05, R^2 = .003$, or desire for control, $F(3,233) = 0.34, p > .05, R^2 = .001$.

Table 5: ANOVA Source Table for Hypothesis V and VI (DV: Attitude Toward Advertising)

Source	SS	df	MS	F	p
(AB Cells)	512.41	1			
Customization (A)	3.81	1	3.81	0.06	0.81
Desire for Control (B)	22.54	1	22.54	0.34	0.56
Type of Advertising (C)	394.51	1	394.51	5.99	<.05
Customization x Control (AxB)	23.24	1	23.24	0.35	0.48
Ad Type x Control (BxC)	25.67	1	25.67	0.39	0.53
Customization x Ad Type (AxC)	2.64	1	2.64	0.04	0.84
Customization x Ad Type x Control (AxBxC)	11.55	1	11.55	0.18	0.68
Error	9883.03	150	47.21		
Total	10395.44	158			

Additionally, no interaction effects were detected for customization by type of advertising, customization by desire for control, or customization by ad type by desire for control. Thus, hypothesis V, which states that subjects with a high desire for control will have a significantly more positive attitude toward advertising when given the choice to customize their online environment, is not confirmed. However, based on this analysis, it is clear that subjects had a significantly more positive attitude toward keyword advertising ($M=3.27, SD=1.03$) than toward banner advertising ($M=2.86, SD=0.97$). As such, hypothesis VI is partially confirmed, however since no interaction effects existed

between desire for control and ad type, it cannot be completely confirmed. Figure 7 illustrates the interaction effects for HV and HVI.

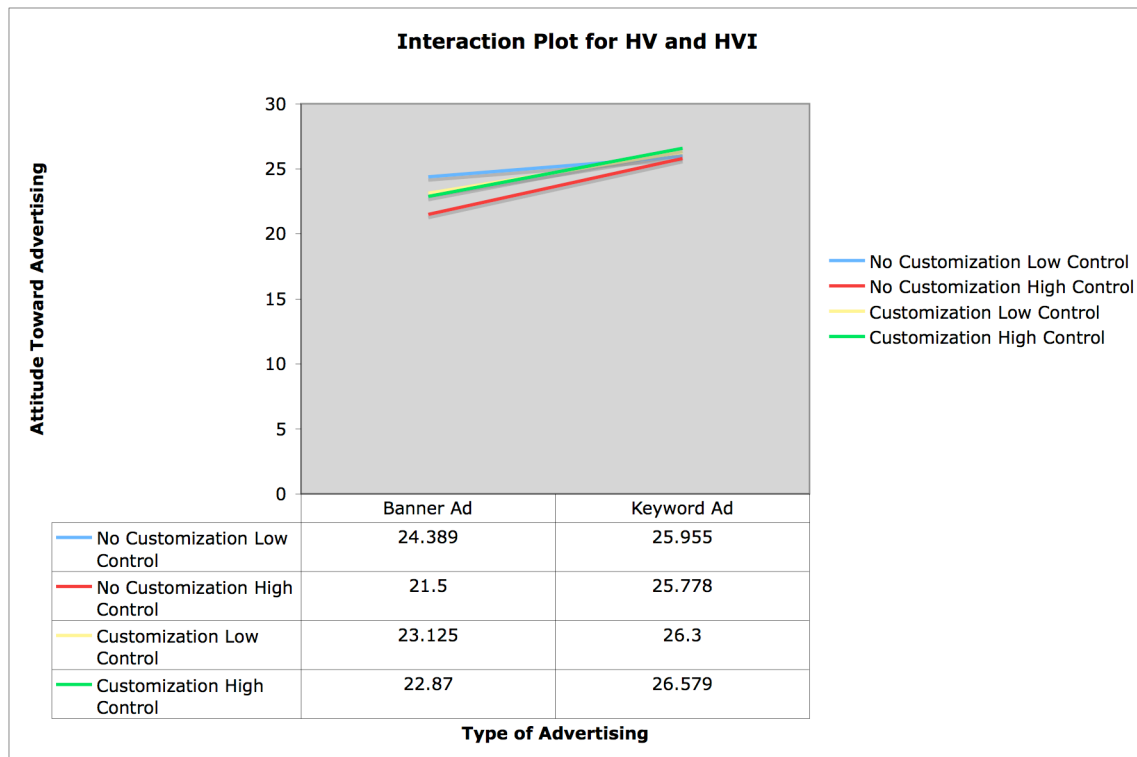


Figure 7: ANOVA Interaction Plot for Hypotheses V and VI

The next series of hypotheses deal with a subjects ability to recall media content following exposure to the experimental stimuli. As noted previously, aided and unaided recall scores were computed for each subject based on their responses to a series of information gathering questions about the test article (See Appendices E and G). In general, subjects had higher aided recall ($M=6.38$, $SD=1.44$) than unaided recall ($M=5.16$, $SD=1.12$) scores. To determine whether both level of customization (high vs. low) as well as desire for control (high vs. low) have an impact on a subject’s ability to recall media content, two independent, between subjects ANOVAs were conducted using aided recall scores and unaided recall scores as dependent variables, respectively. While

no effects were found when examining unaided recall, several interesting patterns emerged with regard to customization, control and a subject's ability to recall media content. Hypothesis VII states that consumers with a high desire for control will have greater recall of media content when exposed to said content through by way of customization priming, versus no customization priming. A significant main effect was found for desire for control, $F(3,233)=4.12$, $p < .05$, $R^2 = .02$; however, no main effect was found for level of customization, $F(3,233)=0.73$, $p > .05$, $R^2 = .003$, or for the interaction between desire for control and customization, $F(3,233)=0.16$, $p > .05$, $R^2 = .001$, on aided recall scores.

Table 6: ANOVA Source Table for Hypothesis VII and VIII (DV: Aided Recall Score)

Source	SS	df	MS	F	p
(AB Cells)	6.28	1			
Customization (A)	0.91	1	0.91	0.73	0.39
Desire for Control (B)	5.15	1	5.16	4.12	<.05
Customization x Control (AxB)	0.2	1	0.2	0.16	0.69
Error	291.78	233	1.25		
Total	298.06	237			

Subjects, with a high desire for control who received a customized condition, actually had lower aided recall of media content than those subjects who were high in desire for control and exposed to a non-customized online environment. Similarly, those subjects who were low in desire for control and exposed to a customized online environment had lower aided recall scores than those low control subjects who were exposed to a non-customized online environment. Thus, while hypothesis VII cannot be confirmed, hypothesis VIII is confirmed. Subjects with a low desire for control will in

fact experience a decreased ability to recall media content when exposed to a customized online environment. Interaction effects are highlighted in Figure 8 below.

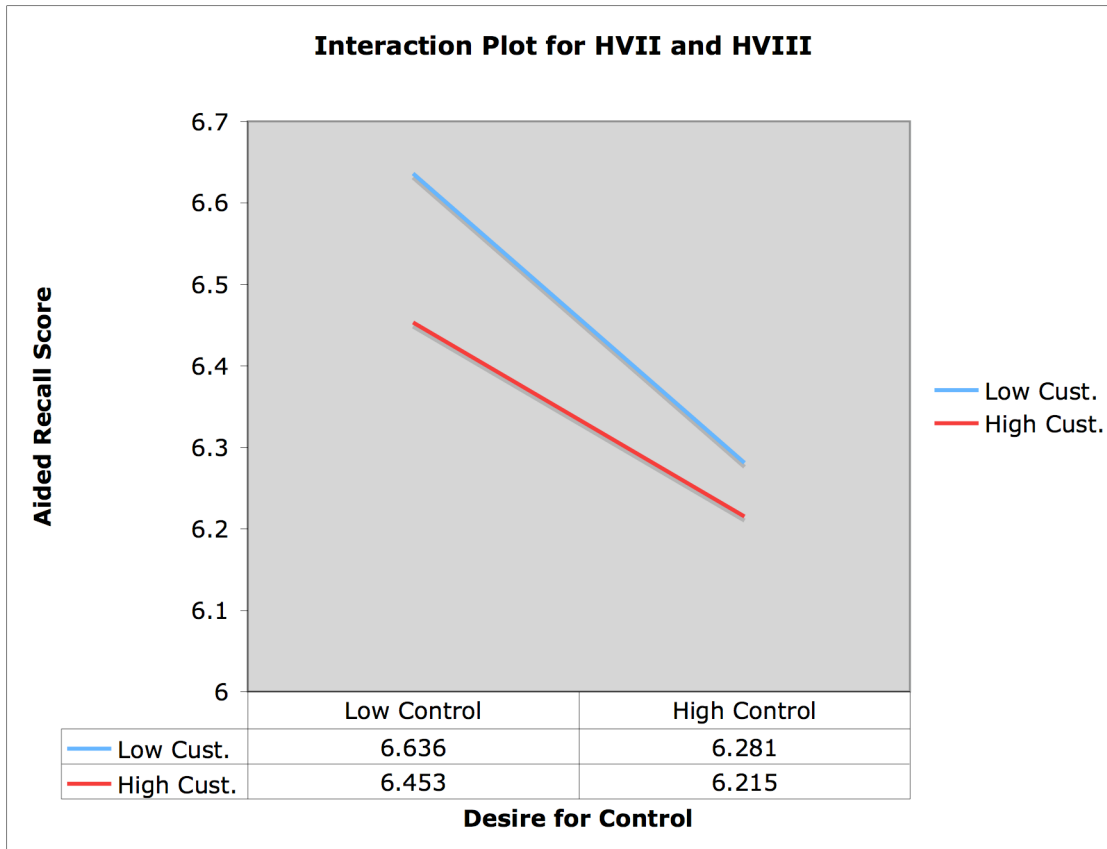


Figure 8: ANOVA Interaction Plot for Hypotheses VII and VIII

The remaining two hypotheses are concerned with behavioral intention for interacting with advertising in online environments; thus, only those subjects who were exposed to advertising will be included in the analysis (N=158). An analysis of variance was undertaken to determine what impact customization (high vs. low) and desire for control (high vs. low) has on a subject's behavioral intention for interacting with online advertising, specifically the banner ad or keyword ad displayed in the experimental stimuli. A main effect was not found for customization, $F(3,154)=0.32, p > .05, R^2 =$

.002; however, a main effect was found for desire for control, $F(3,154)=4.51$, $p < .05$, $R^2 = .03$, as well as an interaction effect between control and customization, $F(3,154)=10.32$, $p < .01$, $R^2 = .06$.

Table 7: ANOVA Source Table for Hypothesis IX and X (DV: Adv Behavioral Intent)

Source	SS	df	MS	F	p
(AB Cells)	695.96	1			
Customization (A)	14.77	1	14.77	0.32	0.57
Desire for Control (B)	206.03	1	206.03	4.51	<.05
Customization x Control (AxB)	472.06	1	472.06	10.32	<.01
Error	7044.63	154	45.74		
Total	7740.59	158			

Hypothesis IX states that high control consumers who are exposed to banner advertising via a customized online environment will have a greater behavioral intention for clicking on the ad than those high control consumers who are exposed to banner advertising via a non-customized online environment. Upon examining the interaction graphs, the reverse is actually true: subjects with a high desire for control who are exposed to banner advertising via a non-customized online environment actually have greater intent for clicking on the banner ad than high control subjects exposed to a customized online environment. Thus, hypothesis IX is rejected.

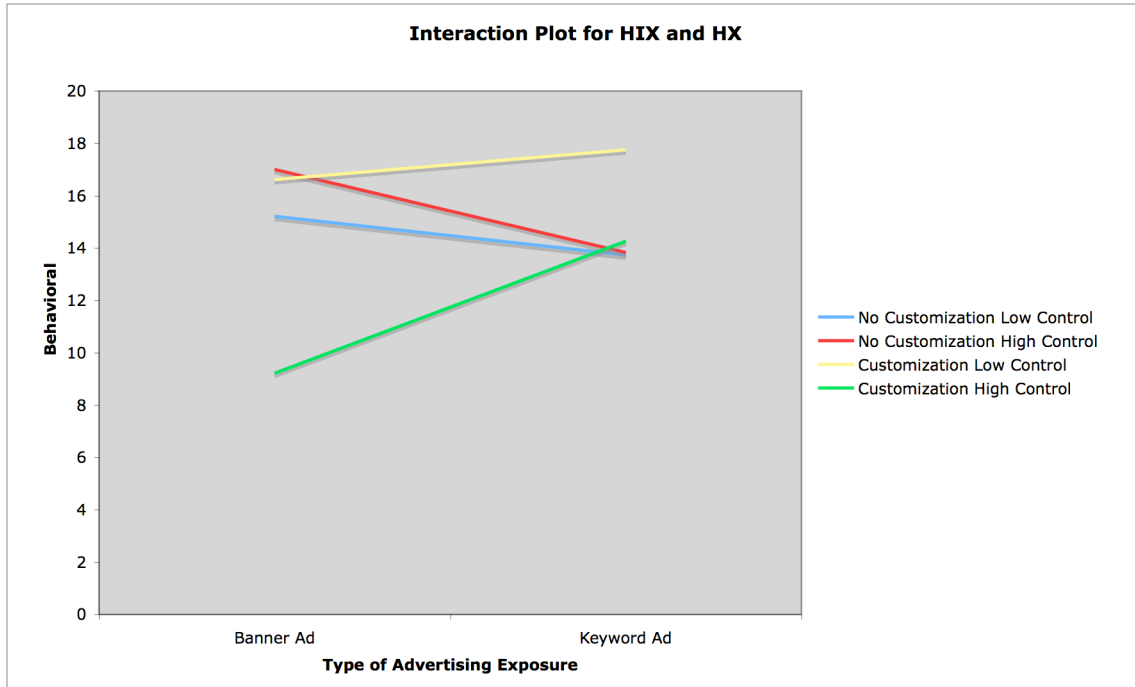


Figure 9: ANOVA Interaction Plot for Hypotheses IX and X

Hypothesis X confers that high control subjects who are exposed to keyword advertising via customized online environments will have greater behavioral intention for clicking on the ad than those high control subjects who are exposed to banner advertising in the same context. Indeed, as the data indicate, subjects do have a greater intention for clicking on keyword ads, as compared to banner ads, when exposed to such advertising in customized online environments. On the whole, those subjects with a low desire for control had greater behavioral intention for clicking on ads, however their intention was greater when exposed to banner ads rather than keyword ads. Alternatively, high control consumers had a greater intention of clicking on keyword ads, as compared to banner ads. Thus, hypothesis X is confirmed.

Additional Analysis

Although not hypothesized, a consumer's level of information overload, in conjunction with their desire for control, could potentially impact their experience with customized online environments. To investigate the interactions between customization, type of advertising, and desire for control, while holding degree of information overload constant, a 2 x 2 x 2 ANCOVA analysis was undertaken including only those subjects who were exposed to advertising in the online environments (N = 158). As with all mass media, customized online environments will have a certain degree of advertising present. Therefore, it is intuitive to investigate those subjects who were exposed to advertising via a customized online environment.

Table 8: ANCOVA Source Table for Additional Analysis (DV: Media Enjoyment)

Source	SS	df	MS	F	p
Corrected Model	645.89	8.00	80.74	1.94	0.06
Intercept	16779.22	1.00	16779.22	404.10	0.00
Information Overload	109.24	1.00	109.24	2.63	0.11
Customization	230.37	1.00	230.37	5.55	0.02
Type of Advertising	15.86	1.00	15.86	0.38	0.54
Desire for Control	14.90	1.00	14.90	0.36	0.55
Customization x Ad Type	69.15	1.00	69.15	1.67	0.20
Customization x Control	10.98	1.00	10.98	0.27	0.61
Ad Type x Control	17.65	1.00	17.65	0.43	0.52
Cust. x Ad Type x Control	150.99	1.00	150.99	3.64	0.05
Error	6186.81	149.00	41.52		
Total	235517.00	158.00			
Corrected Total	6832.69	157.00			

R Squared = .095 (Adjusted R Squared = .046)

Borrowing from previous research conducted by Bright, Eastin, Daugherty and Gangadharbatla (2007), an eight-point control scale was constructed based on a scale used to measure desire for control as it relates to DVR behaviors. Given the high degree

of control that both DVR technologies and customized online environments provide for consumers with regard to media choice, the scale was acceptable for use in this analysis. Once constructed, the eight-item scale was split into dichotomous variable using a median split ($M=39.16$, $SD=4.94$, $Median=39$, $\alpha=0.71$). Following the split, eighty-seven subjects were designated as having a low desire for control and seventy-one subjects were designated as having a high desire for control.

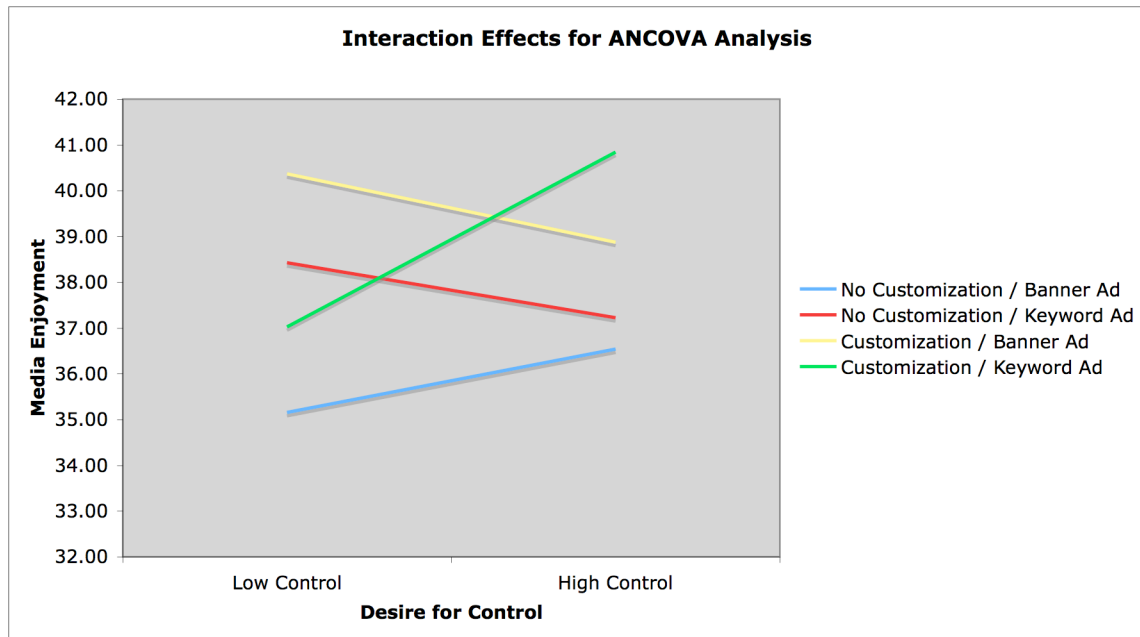


Figure 10: ANCOVA Interaction Plot for Additional Analysis

Several interesting interactions emerged from the ANCOVA analysis, including a significant main effect for customization on media enjoyment, $F(3,154)=5.55$, $p < .05$, $R^2 = .09$ as well as a three-way interaction between customization, type of advertising present, and desire for control, $F(3,233)=3.64$, $p < .05$, $R^2 = .09$, with regard to their impact on perceived media enjoyment. In terms of media enjoyment, the most dramatic difference in mean scores was between those exposed to banner advertising via a non-

customized online environment and those exposed to banner advertising via a customized online environment. Those subjects in the customized conditions who were also exposed to banner advertising had the greatest perceived media enjoyment of all experiment groups. When examining desire for control and level of customization in terms of their impact on media enjoyment, those subjects who were exposed to conditions without customization had virtually synonymous media enjoyment levels across the two levels of control. However, those subjects who were exposed to customized online environments and have a high desire for control experienced greater media enjoyment than the same condition subjects who were characterized as low in desire for control. When distinguishing between types of advertising, the high control subjects who were exposed to banner advertising had virtually the same level of media enjoyment as the low control subjects in both the banner and keyword advertising conditions. The high control subjects who were exposed to keyword advertising had the highest level of media enjoyment.

Chapter 6

Summary and Conclusions

Discussion

As the media landscape continues to converge and consumers gain more control over their media exposure, it is imperative for advertisers to gain insights into what types of advertising work best in such new media environments. While the use of customized online media environments has not become mainstream yet, their increased availability through Apple and Microsoft based web platforms as well as being offered in the form of desktop applications, at little or no cost, has reduced the barriers to entry for this technology. From an advertising perspective, the Limited Capacity Model provides a framework for better understanding consumers abilities to process both media content and advertising within customized online media environments (Lang, 2000). In applying this framework as well as the expectancy-value model to the processing of various types of advertising, insights emerged regarding what forms of advertising are best used in such environments. Although the question as to which types of advertising are effective remains constant, new answers are coming to light as technology continues to improve our media experience.

This study set out to better understand the impact of perceived choice, i.e. customization, on the evaluation of online environments, specifically news based content, and how this interaction effected the cognitive, affective and behavioral dimensions of the consumer experience. With regard to media enjoyment, several interesting effects emerged, especially when a consumer's desire for control and degree of information

overload was taken into account as a factor in their online experience. The data indicate that those subjects who were given a perceived choice in customizing their online environment experienced greater media enjoyment than those who had no perceived control. This perception of choice, or ability to customize an online environment, may result in a perceived decrease in information overload due to the connotation that the information displayed in a customized online environment is tailored to one's needs (Liang, et al., 2006). Thus, with a perceived decrease in information load coupled with a feeling of control, subjects were able to experience greater media enjoyment.

Furthermore, within the group of subjects who received customization priming prior to exposure to the stimulus, those who were exposed to banner advertising perceived the greatest media enjoyment, followed by those who were exposed to keyword advertising and no advertising (control). Within the group of subjects who were not exposed to customization priming, those exposed to a keyword ad alongside their media content had the greatest media enjoyment, followed by those who saw no advertising, and lastly, those who were exposed to banner advertising. These results indicate that subjects who were exposed to a customized online environment may have been more open to viewing advertisements due to the perceived choice they had over their media content.

The presence of advertising in the online environment did not hamper media enjoyment; instead, subjects who were exposed to advertising perceived the greatest media enjoyment. Subjects who did not receive customization priming had the greatest media enjoyment when exposed to keyword advertising alongside their media content; alternatively, subjects who received customization priming indicated having the greatest

media enjoyment when exposed to banner ads. This difference in enjoyment based upon type of advertising exposure could be explained by the perceived tailoring of content that customization priming provides – when subjects receive customization priming, they may inherently find the content to be more relevant and thus be more open to processing advertising in this context. In addition, those subjects in conditions without customization priming, who are evaluating a highly standard web environment, naturally have more enjoyment when exposed to the least intrusive form of advertising, keyword ads.

A consumer's desire for control was also posited to have an impact on their enjoyment of customized online environments. The data indicate that subjects with a high desire for control did indeed experience greater media enjoyment when exposed to customized online environments, versus those high control subjects who were exposed to a non-customized online environment. Similarly, low control subjects experienced greater media enjoyment when given customization priming before exposure to the experiment stimulus. With regard to advertising, subjects with a high desire for control experienced the greatest levels of media enjoyment when exposed to keyword advertising, followed by banner advertising and, lastly, no advertising. Alternatively, subjects with a low desire for control experienced a similarly low level of media enjoyment when exposed to either banner advertising or no advertising. While relatively low, subjects with a low desire for control who were exposed to keyword advertising had the highest media enjoyment level within the group. Thus, those conditions with keyword advertising contribute to media enjoyment for both low and high desire for control subjects, however those conditions with banner advertising generated greater media enjoyment in high control subjects.

Along with desire for control, perceived information overload is a potential contributing factor in the usage model for customized online environments. By nature, customized online environments tailor displayed information to the specifications of the user, thereby decreasing the amount of information that has to be consumed in order to fulfill one's goals. Simply put, customized media environments provide a manageable space to consume information and could potentially reduce feelings of information overload. As the data indicate, subjects with a low level of information overload experienced the lowest level of media enjoyment when exposed to non-customized conditions while those exposed to customized conditions experienced the highest level of media enjoyment, across all groups. While those high information overload subjects who experienced customized online environments did experience greater media enjoyment than those in non-customized conditions, the results were not statistically significant. Given that both high and low information overload subjects perceived greater media enjoyment in customized conditions, as compared to non-customized conditions, it is possible that the ability to customize their online environment gave subject's a perception of tailored information, thus reducing perceived information overload.

For industry professionals and academicians alike, it is vital to better understand what types of advertising are most effective in both traditional and new media. Within the new media environment under investigation herein, effectiveness of the ad is gauged in terms of attitude toward the ad, or affect. Since rich media is not currently supported for RSS feeds, this study focused on the types of advertising currently available via this medium, traditional banner ads and keyword ads. Overall, regardless of customization level, subjects had a more positive attitude toward keyword advertising, when compared

to banner advertising. Due to its low level of intrusiveness, keyword advertising could potentially be perceived as less annoying and disruptive, thereby creating greater positive affect than the banner ad (Li, et al, 2001). When desire for control is factored in, those subjects who were exposed to customized conditions, regardless of level of desire for control, had average attitudes toward the ad. However, those subjects exposed to non-customized conditions varied greatly depending on their desire for control. While low control consumers in non-customized conditions exhibited the most positive attitude toward the ad (across all groups), high control consumers in non-customized conditions had the most negative attitude toward the ad. In some cases, the presence of advertising can be interpreted as a loss of control. Thus, high control consumers may be pre-disposed to form negative attitudes toward advertising messages that cannot be controlled.

In terms of behavioral intention, it is imperative to better understand whether the availability of customization in online environments could potentially lead to greater behavioral intention for interacting with interactive advertising. When compared across customization conditions, those subjects who viewed banner advertising within a non-customized online environment had the highest behavioral intention for clicking on the ad, followed closely by subjects who were exposed to customized online environments containing keyword advertising. Overall, those subjects with a low desire for control had a greater likelihood (i.e. behavioral intention) to interact with the ad than did those subjects with a high desire for control. This was particularly offset by the low likelihood or intention for clicking on the ad exhibited by subjects with a high desire for control. Again, since advertising can be seen as a loss of control, it is intuitive that consumers

with a high desire for control would have a lower likelihood to interact with a device that limits their control.

Limitations

As with any experimental research, there are a series of limitations that affect the validity and reliability of the stated results. This experiment has a series of limitations that should be considered in light of the findings regarding customized online environments. First and foremost, the sample used to conduct this research was a convenience sample of undergraduate college students. Thus, there are serious concerns with the external validity of the findings. However, since this study was an exploratory endeavor to better understand how consumers interact in customized online environments, the data can aptly be used to explore the relationship between theoretical constructs. Additionally, the study sample represents the new generation of digital natives whose attention is a luxury for today's marketers and advertisers. It is imperative to provide insights into how these consumers interact with online environments when given the perception of choice.

Another limitation to this study is the online environment used for the experiment stimuli. Due to technical restrictions and inability to control for order effects with regard to the display of news content, a typical news aggregation application could not be used for the study. Instead, a series of blogs were created to mimic the aesthetics of a news feed application, such as Google Reader or NetNewsWire. Although the functionality of those applications was not present in the stimuli, the layout of the content and advertising was similar a typical RSS feed, i.e. a headline, the body of the article, and an advertisement. Additionally, to insure a controlled environment in terms of news content

displayed, a customization form was used to simulate the customization of content available through the online environment as opposed to allowing consumers to choose their own content. Typically, when creating a customized media environment, consumers have the ability to choose their own news feeds; however, to insure the highest degree of control, subjects were limited to the review of one of six online environments. In the future, a usability analysis should be conducted to better understand how consumers are truly interacting with content aggregation services, thereby creating a better framework for the next generation of experimental stimuli.

Future Research

As media continue to converge, becoming evermore personalized and relevant, it is vital for advertisers and academicians to investigate new media outlets in terms of their effectiveness at delivering messages as well as the consumer based traits that drive their interactions in such environments. This research provides exploratory insights, using a small convenience sample, into how the individual consumer traits of control and information overload interact with customization in online environments to impact media enjoyment, recall, attitude toward advertising and behavioral intention. As indicated here, when consumers have their expectations manipulated, in this case via customization priming, it impacts their overall experience with the experimental stimuli. Given this relationship, as well as the others identified in this research, additional research should be conducted to determine what additional individual characteristics have an impact on the attitudes and behaviors derived from experiences with customized online environments.

While this study provides a tentative linkage between customization, control, and advertising within online environments, additional research must be conducted to

establish firm relationships amongst the proposed constructs. Clearly, a consumer's desires for control and level of information overload have an impact on experiences with media environments; however, additional factors such as self-efficacy, ad avoidance, and prior experience with news aggregators may also make significant contributions to a consumer's experience with customized online environments.

With the glut of information currently available online, consumers are struggling to find the content they want in a reasonable amount of time. News aggregation services will undoubtedly continue to grow in the coming years as more consumers realize their capacity to manage information and decrease information overload. As such, advertisers should consider RSS feeds as a provocative new media space to explore. Given the potential for the delivery of highly relevant ads, coupled with the greater amount of media enjoyment subjects have shown in customized environments, this media outlet could become the new niche for interactive advertising. Theoretically speaking, this research indicates that consumers who are given a perception of choice, or involvement in their media content, tend to have greater enjoyment when exposed to media environments.

APPENDICES

A: EXPERIMENT PROTOCOL

1. Send reminder email to participants one day before their scheduled timeslot. This email includes a link to the pre-experiment questionnaire (Appendix B) as well as directions to the Media Lab facility (See Appendix H for email text).
2. Greet participants as they enter the Media Lab (CMA 6.102)
3. Confirm that they have completed the pre-test questionnaire that was emailed to them with their appointment reminder
 - a. If the participant has not completed the pre-test, assign them to the machine # 9 (closest to the tech rack) and have them get started on the pre-test questionnaire
 - b. Once the participant is done with the pre-test, proceed to Step 3
4. Give the participant a consent form and make sure they sign and print their name on the back of the consent form before beginning the experiment.
5. Escort the participant to their experiment station
 - a. Machines 1 through 8 should be used to complete the experiment session.
 - b. Machine 9 is the spare to be used for pre-test people or to get someone started on Part I if there is a wait.
6. Once the participant is seated, read them the following directions:

Today you are being asked to evaluate an online news environment, please follow the directions on this page closely and click on the link provided to view your news environment. You are required to read the first article – the remaining articles can be browsed if you desire. When you are done, simply close the tab in your web browser and begin taking the follow-up questionnaire. Thank you for your participation!
7. Fill out the condition #, date, and researcher fields on the back of the consent form
8. Record name and email address on record sheet
9. Once the session is complete, provide the participant with the following debriefing statement:

- a. The purpose of this study was to investigate the effects of choice on media enjoyment and recall of information. Some of you were allowed to customize your online environment while others were simply directed to an online environment to review. In addition, some of you were exposed to banner advertising or keyword advertising, while others were exposed to no advertising at all. The post-experiment questionnaire measured the different aspects across which the six different groups are compared. Do you have any questions or concerns about your participation in the study? (If yes, answer questions) Thanks for your participation!
10. At this time, provide a copy of the consent form to the research participant if they desire one for their records.
11. After participants have left the Media lab, re-launch web browser and reload conditions onto each machine after every participant according to condition by time slot table.

B: PRE-EXPERIMENT QUESTIONNAIRE

Page 1: Informed Consent to Participate in Research

You are being asked to participate in a research study. This form provides you with information about the study. Please read the information below and ask questions about anything you don't understand before deciding whether or not to take part. Your participation is entirely voluntary and you can refuse to participate without penalty or loss of benefits to which you are otherwise entitled.

Title of Research Study: An Evaluation of Online News Environments

Principal Investigator: Laura F. Bright, PhD Candidate, Department of Advertising, University of Texas at Austin (512-471-1101) with faculty supervisor, Terry Daugherty, Ph.D., Department of Advertising, University of Texas at Austin (512-471-8917)

What is the purpose of this study?

This study seeks to gain insight into the development of online news environments by obtaining consumer opinions on the topic.

What will be done if you take part in this research study?

If you agree to participate in this study, you will be asked to navigate on a specific website and answer a series of questions regarding your reactions to the site. Your participation in this study should take no more than 30 minutes of your time.

What are the possible benefits to you or to others?

You can learn about your online navigation behavior. Additionally, your personal input for this study is important in providing insight to researchers seeking to develop effective online applications and environments.

If you choose to take part in this study, will it cost you anything?

It will cost you nothing to participate in this study.

Will you receive compensation for your participation in this study?

No monetary compensation for your participation will be provided. However, you may receive extra credit for the advertising course you are currently enrolled in.

If you do not want to take part in this study, what other options are available?

Participation in this study is entirely voluntary. You are free to refuse to be in the study, and your refusal will not influence current or future relationships with The University of Texas at Austin.

How can you withdraw from this study and who should I call if I have questions?

If you wish to stop your participation in this research study for any reason, you should contact: Laura F. Bright at (512) 471-1101 or Dr. Terry Daugherty at (512) 471-8917. You are free to withdraw your consent and stop participation in this research study at any time without penalty or loss of benefits for which you may be entitled. In addition, if you have questions about your rights as a research participant, please contact The University of Texas at Austin Institutional Review Board for the Protection of Human Subjects, (512) 232-4383.

How will the privacy and the confidentiality of your records be protected?
Authorized persons from The University of Texas at Austin and the Institutional Review Board have the legal right to review your research records and will protect the confidentiality of those records to the extent permitted by law. If the research project is sponsored then the sponsor also has the legal right to review your research records. Otherwise, your research records will not be released without your consent unless required by law or a court order. If the results of this research are published or presented at scientific meetings, your identity will not be disclosed.

Will the researchers benefit from your participation in this study?
The researchers will not benefit from your participation except for presenting and publishing the results.

By clicking the link below, you are consenting to participate in this research.

Page 2: Introduction

Hello and welcome!

Thank you for agreeing to participate in this research project.

Before you come in to the lab tomorrow, I'd like to get some information concerning your individual characteristics and media habits.

Please fill out the following questions before you come in to the lab tomorrow to complete Part II of your participation. It is vital that you complete this survey and attend your lab session in order to be entered into the cash prize drawing pool and / or receive extra credit.

All of your responses will remain anonymous. However, in order to link your responses from Part I and Part II, we must collect your email address. Please be assured that this information will be removed at the end of our data collection so that your responses remain anonymous.

Please click the button below to begin.

I'll look forward to seeing you at the lab tomorrow!

Thanks, Laura B.

Page 3: Desire for Control Question Set

Please read each statement carefully and respond to it by expressing the extent to which you believe the statement applies to you. Choose the number that best reflects your beliefs. (Note: Items with an asterisk were reverse coded.)

I prefer a job where I have a lot of control over what I do and when I do it.

1=Never / 2=Almost Never / 3=Seldom / 4=Sometimes / 5=Fairly Often / 6=Often / 7=Always

I enjoy political participation because I want to have as much of a say in running government as possible.

1=Never / 2=Almost Never / 3=Seldom / 4=Sometimes / 5=Fairly Often / 6=Often / 7=Always

I try to avoid situations where someone else tells me what to do.

1=Never / 2=Almost Never / 3=Seldom / 4=Sometimes / 5=Fairly Often / 6=Often / 7=Always

I would prefer to be a leader rather than a follower.

1=Never / 2=Almost Never / 3=Seldom / 4=Sometimes / 5=Fairly Often / 6=Often / 7=Always

I enjoy being able to influence the actions of others.

1=Never / 2=Almost Never / 3=Seldom / 4=Sometimes / 5=Fairly Often / 6=Often / 7=Always

I am careful to check everything on an automobile before I leave for a long trip.

1=Never / 2=Almost Never / 3=Seldom / 4=Sometimes / 5=Fairly Often / 6=Often / 7=Always

Others usually know what is best for me. *

1=Never / 2=Almost Never / 3=Seldom / 4=Sometimes / 5=Fairly Often / 6=Often / 7=Always

I enjoy making my own decisions.

1=Never / 2=Almost Never / 3=Seldom / 4=Sometimes / 5=Fairly Often / 6=Often / 7=Always

I enjoy having control over my own destiny.

1=Never / 2=Almost Never / 3=Seldom / 4=Sometimes / 5=Fairly Often / 6=Often / 7=Always

I would rather someone else took over the leadership role when I'm involved in a group project. *

1=Never / 2=Almost Never / 3=Seldom / 4=Sometimes / 5=Fairly Often / 6=Often / 7=Always

I consider myself to be generally more capable of handling situations than others are.

1=Never / 2=Almost Never / 3=Seldom / 4=Sometimes / 5=Fairly Often / 6=Often / 7=Always

I'd rather run my own business and make my own mistakes than listen to someone else's orders.

1=Never / 2=Almost Never / 3=Seldom / 4=Sometimes / 5=Fairly Often / 6=Often / 7=Always

I like to get a good idea of what a job is all about before I begin.

1=Never / 2=Almost Never / 3=Seldom / 4=Sometimes / 5=Fairly Often / 6=Often / 7=Always

When I see a problem I prefer to do something about it rather than sit by and let it continue.

1=Never / 2=Almost Never / 3=Seldom / 4=Sometimes / 5=Fairly Often / 6=Often / 7=Always

When it comes to orders, I would rather give them than receive them.

1=Never / 2=Almost Never / 3=Seldom / 4=Sometimes / 5=Fairly Often / 6=Often / 7=Always

I wish I could push many of life's daily decisions off on someone else. *

1=Never / 2=Almost Never / 3=Seldom / 4=Sometimes / 5=Fairly Often / 6=Often / 7=Always

When driving, I try to avoid putting myself in a situation where I could be hurt by someone else's mistake.

1=Never / 2=Almost Never / 3=Seldom / 4=Sometimes / 5=Fairly Often / 6=Often / 7=Always

I prefer to avoid situations where someone else has to tell me what it is I should be doing.

1=Never / 2=Almost Never / 3=Seldom / 4=Sometimes / 5=Fairly Often / 6=Often / 7=Always

There are many situations in which I would prefer only one choice rather than having to make a decision. *

1=Never / 2=Almost Never / 3=Seldom / 4=Sometimes / 5=Fairly Often / 6=Often / 7=Always

I like to wait and see if someone else is going to solve a problem so that I don't have to be bothered by it. *

1=Never / 2=Almost Never / 3=Seldom / 4=Sometimes / 5=Fairly Often / 6=Often / 7=Always

Page 4: Social Connectedness Question Set

Now, we would like to learn how socially connected you feel. Please indicate how much you agree with each of the following statements.

I feel disconnected from the world.

Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

Even around people I know, I don't feel that I belong.

Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

I feel so distant from people.

Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

I don't feel related to anyone.

Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

I catch myself losing all sense of connectedness with society.
Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

Even among my friends, there is not sense of brother/sisterhood.
Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

I don't feel I participate with anyone or any group.
Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

I have no sense of togetherness with my peers.
Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

Page 5: Need for Cognition Question Set

Please indicate how much you agree with each of the following statements by selecting the number that corresponds to your choice. (Note: Items with an asterisk were reverse coded.)

I would prefer complex to simple problems.
Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

I like to have the responsibility of handling a situation that requires a lot of thinking.
Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

Thinking is not my idea of fun. *
Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

I would rather do something that requires little thought than something that is sure to challenge my thinking abilities. *
Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

I try to anticipate and avoid situations where there is likely a chance I will have to think in depth about something. *
Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

I find satisfaction in deliberating hard and for long hours.
Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

I only think as hard as I have to. *
Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

I prefer to think about small daily projects, as opposed to long term ones. *
Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

I like tasks that require little thought once I've learned them. *
Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

The idea of relying on thought to make my way to the top appeals to me.
Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

I really enjoy a task that involves coming up with new solutions to problems.
Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

Learning new ways to think doesn't excite me very much. *
Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

I prefer my life to be filled with puzzles that I must solve.
Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

The notion of thinking abstractly is appealing to me.
Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

I would prefer a task that is intellectual, difficult, and important to one that is somewhat important but does not require much thought.
Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

I feel relief rather than satisfaction after completing a task that required a lot of mental effort. *
Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

It's enough for me that something gets the job done; I don't care how or why it works. *
Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

I usually end up deliberating about issues even when they do not affect me personally.
Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

Page 6: Media Usage Question Set

Next, we are interested in your typical media usage each day. Please think about how much time you spend on average reading, viewing, or listening to various media during the day. Simply provide your best estimate in the boxes below for each medium.

On a typical day, how much time would you estimate that you spend watching television?
(If none, enter a zero in each box)

Hours

Minutes

On a typical day, how much time would you estimate that you spend reading newspapers? (If none, enter a zero in each box)

Hours
Minutes

On a typical day, how much time would you estimate that you spend listening to the radio? (If none, enter a zero in each box)

Hours
Minutes

On a typical day, how much time would you estimate that you spend reading magazines? (If none, enter a zero in each box)

Hours
Minutes

On a typical day, how much time would you estimate that you spend using the Internet? (If none, enter a zero in each box)

Hours
Minutes

On a typical day, how much time would you estimate that you spend consuming user-generated content (i.e. blogs, YouTube, podcasts, Wikipedia, Flickr, Delicious, etc.)? (If none, enter a zero in each box)

Hours
Minutes

On a typical day, how much time would you estimate that you spend consuming content through RSS news feeds? (If none, enter a zero in each box)

Hours
Minutes

On a typical day, how much time would you estimate that you spend using a chat application, including but not limited to iChat or AOL instant messenger? (If none, enter a zero in each box)

Hours
Minutes

On a typical day, how much time would you estimate that you spend text messaging via your cell phone or Personal Digital Assistant (PDA)? (If none, enter a zero in each box)

Hours
Minutes

On a typical day, how much time would you estimate that you spend using email? (If none, enter a zero in each box)

Hours
Minutes

Page 7: General Self-Efficacy Question Set

The next series of questions ask you about your feelings toward your abilities to complete tasks. Please indicate the extent to which you agree or disagree with each of the following statements by clicking on the appropriate button.

I can always manage to solve difficult problems if I try hard enough.
Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

If someone opposes me, I can find the ways and means to get what I want.
Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

I am certain that I can accomplish my goals.
Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

I am confident that I could deal efficiently with unexpected events.
Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

Thanks to my resourcefulness, I can handle unforeseen situations.
Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

I can solve most problems if I invest the necessary effort.
Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

I can remain calm when facing difficulties because I can rely on my coping abilities.
Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

When I am confronted with a problem, I can find several solutions.
Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

If I am in trouble, I can think of a good solution.
Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

I can handle whatever comes my way.
Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

Page 8: Internet Self-Efficacy Question Set

The next series of questions ask you about your Web experiences. Please indicate the extent to which you agree or disagree with each of the following statements by clicking on the appropriate button.

I am extremely skilled at using the Web.
Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

Using the Web does not challenge me.

Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

I consider myself knowledgeable about good search techniques on the Web.

Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

Using the Web challenges me to perform to the best of my ability.

Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

I know somewhat less about the Web than most users.

Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

Using the Web provides a good test of my skills.

Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

I know how to find what I am looking for on the Web.

Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

I find that using the web stretches my capabilities to my limits.

Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

How much time would you estimate that you personally use the Web?

- Over 40 hours per week
- Over 20 and up to 40 hours per week
- Over 10 and up to 20 hours per week
- Over 5 and up to 10 hours per week
- Over 1 and up to 5 hours per week
- One hour a week and less

When did you start using the Web?

- Less than 6 months ago
- Over 6 months and up to a year ago
- Over 1 year and up to 2 years ago
- Over 2 years and up to 3 years ago
- Over 3 years ago

In the coming year, how much do you expect to use the Web, compared to your current level of usage?

- Much more than I do now
- Somewhat more than I do now
- About the same as I do now
- Somewhat less than I do now
- Much less than I do now

What do you generally go online for? (Check all that apply)

Shopping
Entertainment
Research
Work
News and Events
Chatting / Meeting up with friends

On average, how often do you make online purchases from web-based vendors?

Never
Less than once each month
About once each month
Several times each month
About once each week
Several times each week
At least once each day

Page 9: Locus of Control Question Set

Now, we would like to learn more about your individual characteristics. Please review the choices below and choose the statement that best reflects how you feel.

Choose the statement that best reflects how you feel.

Many of the unhappy things in people's lives are partly due to bad luck.

People's misfortunes result from the mistakes they make.

Choose the statement that best reflects how you feel.

One of the major reasons why we have wars is because people don't take enough interest in politics.

There will always be wars, no matter how hard people try to prevent them.

Choose the statement that best reflects how you feel.

In the long run people get the respect they deserve in this world

Unfortunately, an individual's worth often passes unrecognized no matter how hard he tries

Choose the statement that best reflects how you feel.

The idea that teachers are unfair to students is nonsense.

Most students don't realize the extent to which their grades are influenced by accidental happenings.

Choose the statement that best reflects how you feel.

Without the right breaks one cannot be an effective leader.

Capable people who fail to become leaders have not taken advantage of their opportunities.

Choose the statement that best reflects how you feel.

No matter how hard you try some people just don't like you.

People who can't get others to like them don't understand how to get along with others.

Choose the statement that best reflects how you feel.

I have often found that what is going to happen will happen.

Trusting to fate has never turned out as well for me as making a decision to take a definite course of action.

Choose the statement that best reflects how you feel.

In the case of the well-prepared student there is rarely if ever such a thing as an unfair test.

Many times exam questions tend to be so unrelated to course work that studying is really useless.

Choose the statement that best reflects how you feel.

Becoming a success is a matter of hard work, luck has little or nothing to do with it.

Getting a good job depends mainly on being in the right place at the right time.

Choose the statement that best reflects how you feel.

The average citizen can have an influence in government decisions.

This world is run by the few people in power and there is not much the little guy can do about it.

Choose the statement that best reflects how you feel.

When I make plans, I am almost certain that I can make them work.

It is not always wise to plan too far ahead because many things turn out to- be a matter of good or bad fortune anyhow.

Choose the statement that best reflects how you feel.

In my case getting what I want has little or nothing to do with luck.

Many times we might just as well decide what to do by flipping a coin.

Choose the statement that best reflects how you feel.

What happens to me is my own doing.

Sometimes I feel that I don't have enough control over the direction my life is taking.

Page 10: Information Seeking Efficacy Question Set

The next series of questions ask you about your Web experiences that pertain specifically to information seeking. Please indicate the extent to which you agree or disagree with each of the following statements by clicking on the appropriate button.

I am confident using the Internet to gather information.

Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

I am confident downloading software needed to read information found online.

Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

I am confident turning to an online discussion group when help is needed.

Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

I am confident hyper-linking (i.e. clicking on words and information) through online information.

Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

I am NOT confident surfing through a website for information.

Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

I am comfortable browsing user-generated content on sites like YouTube, Flickr, Wikipedia, and Blogger.

Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

I am confident browsing information on social networking sites like Facebook, MySpace and LinkedIn.

Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

I am confident subscribing to news feeds using an information aggregator, such as NetNewsWire, Google Reader, or Bloglines.

Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

Page 11: Information Overload Question Set

Please answer the following questions to the best of your ability.

I am likely to receive too much information when I am searching for something on the Internet.

Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

I am frequently overwhelmed by the amount of information available on the Internet.

Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

I find that search engines do not have enough detail to quickly find the information I am looking for.

Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

The amount of information available online makes me feel tense and overwhelmed.

Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

When searching for information online, I frequently just give up because there is too much to deal with.

Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

I am confident in my ability to deal with large amounts of information on the Internet, such as search results or a full email box.

Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

Page 12: Email Address

Please provide your email address below so that we can properly link your responses to this survey with your experimental data.

Email Address: _____

Page 13: Thank You Message / Acknowledgement of Survey Completion

Thank you for completing this portion of the survey!

To finish your participation, please come to CMA 6.102 during your designated time slot tomorrow.

Part II of the survey should take no more than 20 minutes of your time.

C: STIMULI EVALUATION PROTOCOL

Conditions without Customization Priming

For participants who were randomly assigned to the conditions that did not receive the customization priming (i.e. non-customized conditions, 1A-1B-1C), the following introduction was provided on a web page before their evaluation of the online environment:

“Thank you for completing Part I of this research before arriving!

Now, we would like you to navigate an online environment for the next 5 minutes followed by a brief questionnaire about your experience.

While navigating the online environment, it is mandatory that you read the first article on the page. You will be asked a series of questions regarding this article, so please read it carefully.

Please click on the link below to proceed to the online environment:

CLICK HERE TO BEGIN YOUR REVIEW!

Once you have reviewed the environment, click the link below to proceed to the questionnaire.”

Depending on their condition assignment within the non-customized categories, the web link directed participants to one of three online environments that included either 1) banner advertising (<http://lbdissnc-b.blogspot.com/>), 2) keyword advertising (<http://lbdissnc-c.blogspot.com/>), or 3) no advertising (<http://lbdissnc.blogspot.com/>). (See Appendix D for a visual representation of the online environment).

Conditions with Customization Priming

For participants who were randomly assigned to the conditions that received the customization priming (i.e. customized conditions, 2A-2B-2C), the following introduction was provided on a web page before their evaluation of the online environment:

“Thank you for completing Part I of this research before arriving!

Now, we would like to create a customized online environment for you to browse.

While navigating the online environment, it is mandatory that you read the first article on the page. You will be asked a series of questions regarding this article, so please read it carefully.

As soon as you are ready, please answer the questions below so that we may create your customized environment for you.”

Following the introduction, the following web form was required for participants to complete:

In order to customize your online environment, please answer the following questions:

Today, the number ONE most important news category to me is:

- Sports
- Fashion
- Technology

Today, the number TWO most important news category to me is:

- Sports
- Fashion
- Technology

Today, the number THREE most important news category to me is:

- Sports
- Fashion
- Technology

My current classification at UT is:

- Freshman
- Sophomore
- Junior
- Senior
- 5th year Senior
- Graduate student

What college are you affiliated with at UT Austin?

- Architecture
- McCombs School of Business
- Communication
- Continuing and Extended Education
- Engineering
- Fine Arts
- School of Information
- Geosciences
- School of Law
- LBJ School of Public Affairs
- Liberal Arts
- Natural Sciences
- Nursing

Pharmacy
Social Work
I am not affiliated with a college (Undeclared Major)

Upon completing the customization form, participants were directed to a web page containing the following information:

“Thank you for electing your customization choices!

Now, please click on the link below to review the customized online environment we have created specifically for you.

Please review your customized environment for at least 5 minutes as you complete your task. Don't forget, it is mandatory for you to read the first article!

CLICK HERE FOR YOUR CUSTOMIZED WEBSITE!

When you are done, simply close the window and come back to this page to complete the remainder of the questionnaire.”

Depending on their choice for their number one news category question, the web link directed participants to an online environment that featured a headline related to their category choice (i.e. My Fashion News) and included 1) banner advertising, 2) keyword advertising, or 3) no advertising. A total of nine online environments were created to accommodate the three potential news category choices (Sports, Fashion, Technology) and the three types of advertising exposure (banner ad, keyword ad, no ad) (See Appendix D for a visual representation of the online environments).

Web Links for Experiment Conditions

Pre-Test Survey

http://www.surveymonkey.com/s.aspx?sm=I6KaId4UeKktq1aM_2fALBbw_3d_3d

Group 1 = Non Customized Conditions

A = No Ads
B = Banner Ads
C = Keyword Ads

Group 2 = Customized Conditions

A = No Ads
B = Banner Ads
C = Keyword Ads

Group I

Condition # 1A – Non Customized / No Adv

http://www.surveymonkey.com/s.aspx?sm=_2fB8Q6BnyV1LPpYecyNufmA_3d_3d

Blog URL: <http://lbdissnc.blogspot.com/>

Condition # 1B – Non Customized / Banner Adv

http://www.surveymonkey.com/s.aspx?sm=yYAiPqGEZ3OqP8LZpi_2f4_2fg_3d_3d

Blog URL: <http://lbdissnc-b.blogspot.com/>

Condition # 1C – Non Customized / Keyword Adv

http://www.surveymonkey.com/s.aspx?sm=_2fq_2ftcC_2fyrCmv_2baSiS03cZg_3d_3d

Blog URL: <http://lbdissnc-c.blogspot.com/>

Group 2

Condition # 2A – Customized / No Adv

http://www.surveymonkey.com/s.aspx?sm=lzl9BxX_2bLu_2fFBPqUj8iFDw_3d_3d

Sports - <http://lbdissports-a.blogspot.com/>

Fashion - <http://lbdissfashion-a.blogspot.com/>

Technology - <http://lbdisstechonology-a.blogspot.com/>

Condition # 2B – Customized / Banner Adv

http://www.surveymonkey.com/s.aspx?sm=g28D0ObhJNqEF4hMpzme_2bw_3d_3d

Sports - <http://lbdissports-b.blogspot.com/>

Fashion - <http://lbdissfashion-b.blogspot.com/>

Technology - <http://lbdisstechonology-b.blogspot.com/>

Condition # 2C – Customized / Keyword Adv

http://www.surveymonkey.com/s.aspx?sm=_2bnrGPTTPLqkVaZrlbPTHaw_3d_3d

Sports - <http://lbdissports-c.blogspot.com/>

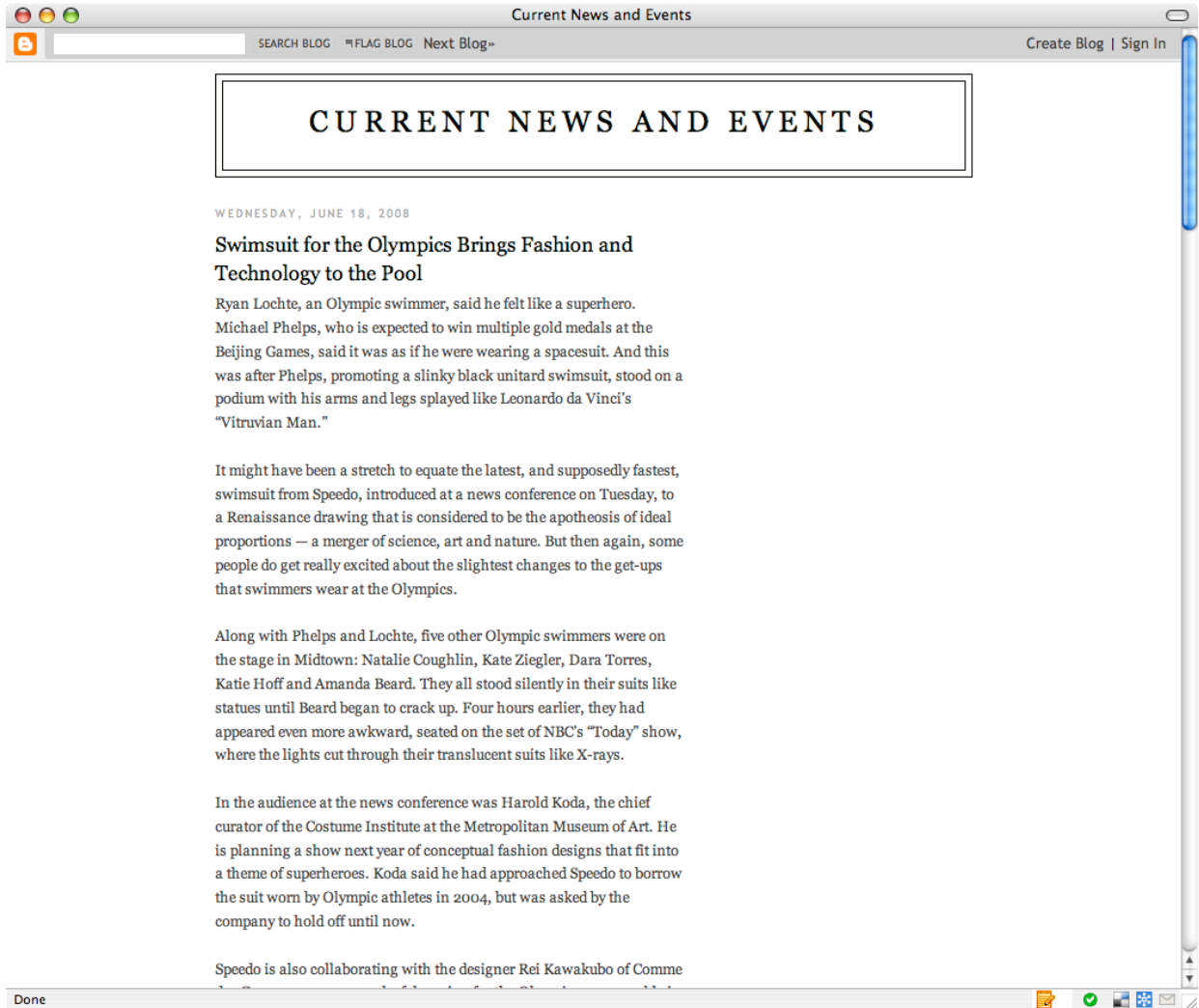
Fashion - <http://lbdissfashion-c.blogspot.com/>

Technology - <http://lbdisstechonology-c.blogspot.com/>

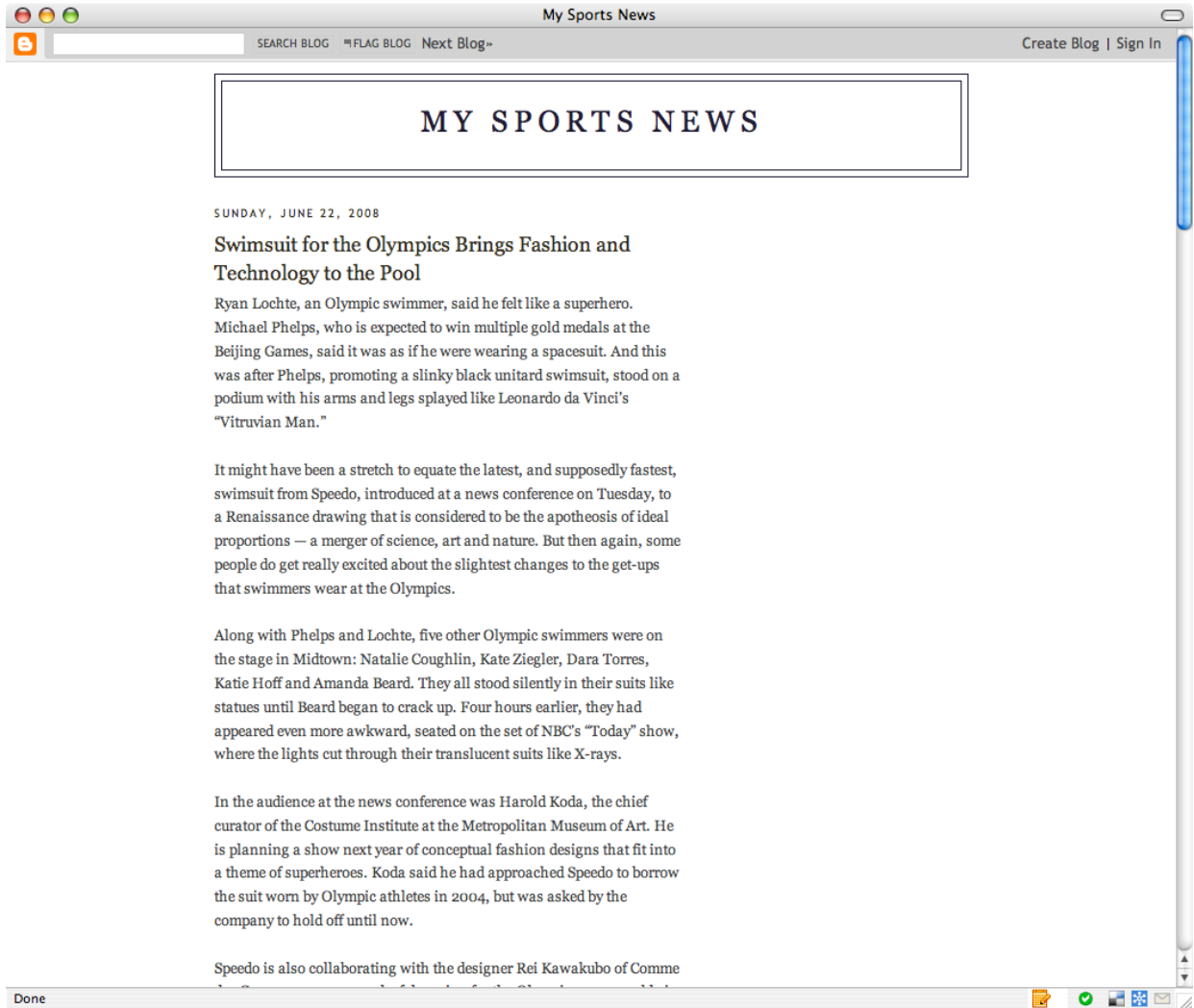
D: EXPERIMENTAL STIMULI

Below is a screenshot of the online environment that was evaluated by those participants who were randomly assigned to the “no customization” conditions (1A, 1B, and 1C).

Note: For those conditions with advertising present, the ads were placed at the end of the first article (e.g., the recall test article).



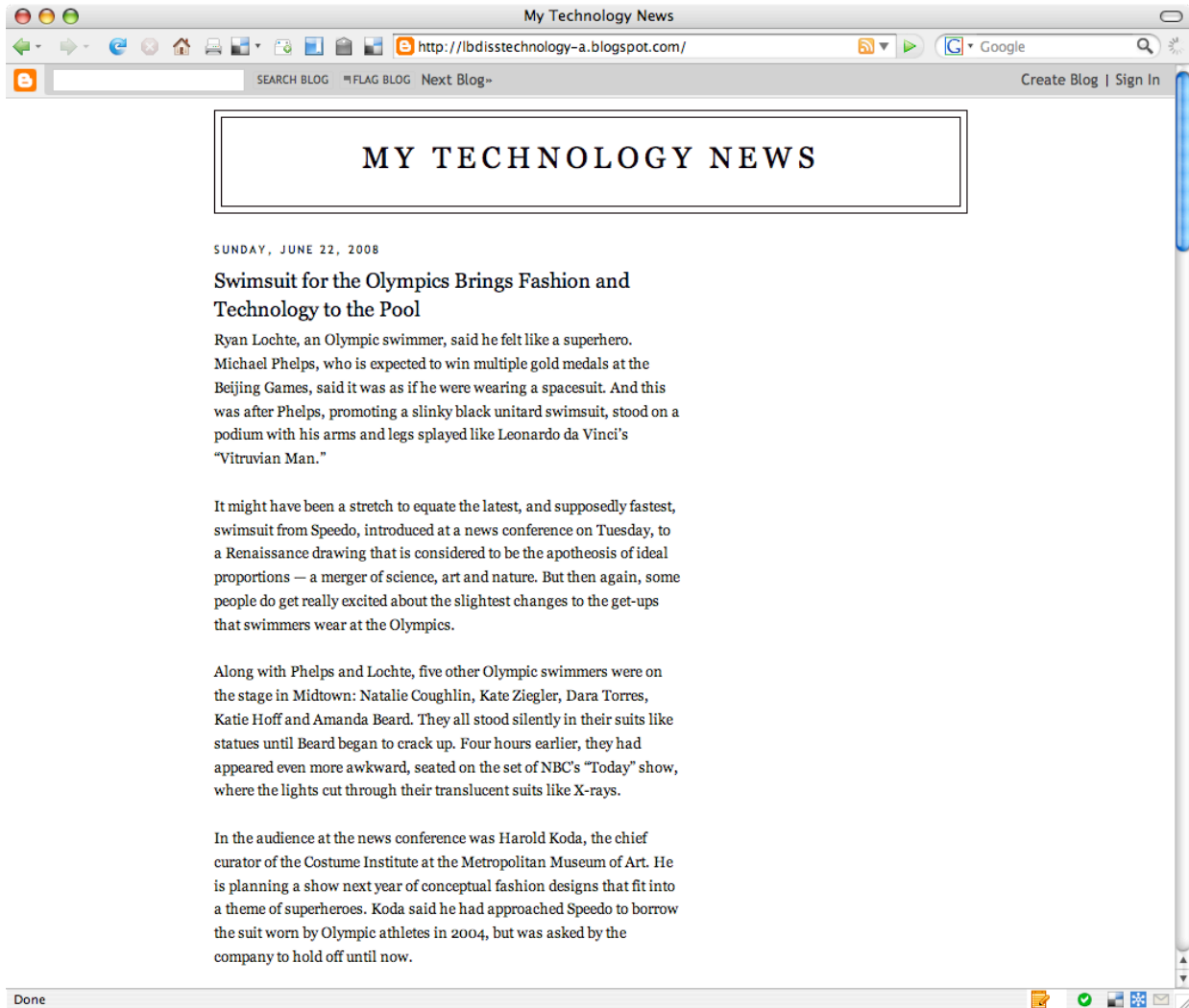
Below is a screenshot of the online environment that was evaluated by those participants who were randomly assigned to the customization conditions (2A, 2B, and 2C) and choose ‘Sports’ as their most important news category the day of the experiment.



Below is a screenshot of the online environment that was evaluated by those participants who were randomly assigned to the customization conditions (2A, 2B, and 2C) and choose 'Fashion' as their most important news category the day of the experiment.



Below is a screenshot of the online environment that was evaluated by those participants who were randomly assigned to the customization conditions (2A, 2B, and 2C) and choose ‘Technology’ as their most important news category the day of the experiment.



E: POST-EXPERIMENT QUESTIONNAIRE

Following the review of their online environment, study participants were then directed to the post-experiment questionnaire.

Page 1: Media Enjoyment Question Set

In terms of media enjoyment, please rate how satisfied you were with the navigation experience you just had by answering the following questions.

The online environment that I just reviewed ...

- Displeased me very much
- Displeased me
- Somewhat displeased me
- Neutral
- Somewhat pleased me
- Pleased me
- Pleased me very much

The online environment that I just reviewed ...

- Disgusted me very much
- Disgusted me
- Somewhat disgusted me
- Neutral
- Made me somewhat content
- Made me content
- Made me very content

The online environment that I just reviewed ...

- Did a very poor job for me
- Did a poor job for me
- Did a somewhat poor job for me
- Neutral
- Did a somewhat good job for me
- Did a good job for me
- Did a very good job for me

The online environment that I just reviewed ...

- Was a very poor choice
- Was a poor choice
- Was a somewhat poor choice
- Neutral
- Was a somewhat good choice
- Was a good choice
- Was a very good choice

The online environment that I just reviewed ...

- Made me very unhappy
- Made me unhappy
- Made me somewhat unhappy
- Neutral
- Made me somewhat happy
- Made me happy
- Made me very happy

The online environment that I just reviewed ...

- Had a very bad value
- Had a bad value
- Had a somewhat bad value
- Neutral
- Had a somewhat good value
- Had a good value
- Had a very good value

The online environment that I just reviewed ...

- Was very frustrating
- Was frustrating
- Was somewhat frustrating
- Neutral
- Was somewhat enjoyable
- Was enjoyable
- Was very enjoyable

The online environment that I just reviewed ...

- Was very unfavorable
- Was unfavorable
- Was somewhat unfavorable
- Neutral
- Was somewhat favorable
- Was favorable
- Was very favorable

Page 2: General Attitude Toward Advertising Question Set

These questions are intended to learn how you feel about advertising in general. Please select the button that most appropriately indicates your level of agreement or disagreement with the following statement.

Advertising provides useful information.

Strongly Disagree 1 2 3 4 5 Strongly Agree

I think advertisements are often deceptive.

Strongly Disagree 1 2 3 4 5 Strongly Agree

I usually do not pay attention to advertisements.

Strongly Disagree 1 2 3 4 5 Strongly Agree

When online, I typically don't click on any type of interactive advertising, including banner ads and pop-ups.

Strongly Disagree 1 2 3 4 5 Strongly Agree

I find advertising to be quite annoying.

Strongly Disagree 1 2 3 4 5 Strongly Agree

I find advertising to be quite irritating.

Strongly Disagree 1 2 3 4 5 Strongly Agree

I am bored by advertising.

Strongly Disagree 1 2 3 4 5 Strongly Agree

Advertisements are quite bothersome to me.

Strongly Disagree 1 2 3 4 5 Strongly Agree

Advertisements constitute a pleasant break from my daily routine.

Strongly Disagree 1 2 3 4 5 Strongly Agree

Advertisements distract unpleasantly from my daily routine.

Strongly Disagree 1 2 3 4 5 Strongly Agree

Advertisements provide an irritating interference with my daily routine.

Strongly Disagree 1 2 3 4 5 Strongly Agree

Page 3: Attitude Toward Online Environment Question Set (Part I)

Please rate the performance of the online news environment you just visited in terms of your feeling towards the environment using the following terms. Check the number closest to the attribute that resembles your feelings.

Chaotic 1 2 3 4 5 6 7 Ordered

Foolish 1 2 3 4 5 6 7 Wise

Unreliable 1 2 3 4 5 6 7 Reliable

Ineffective	1	2	3	4	5	6	7	Effective
Wrong	1	2	3	4	5	6	7	Correct
Unpleasant	1	2	3	4	5	6	7	Pleasant
Awful	1	2	3	4	5	6	7	Nice
Weary	1	2	3	4	5	6	7	Entertaining
Disagreeable	1	2	3	4	5	6	7	Agreeable
Aggravating	1	2	3	4	5	6	7	Soothing

Page 4: Attitude Toward the Act of Navigating Online Environment Question Set

Please rate the performance of the online news environment you just visited in terms of your feeling towards the environment using the following terms. Check the number closest to the attribute that resembles your feelings.

Bad	1	2	3	4	5	6	7	Good
Foolish	1	2	3	4	5	6	7	Wise
Harmful	1	2	3	4	5	6	7	Beneficial
Unpleasant	1	2	3	4	5	6	7	Pleasant
Unsafe	1	2	3	4	5	6	7	Safe
Wrong	1	2	3	4	5	6	7	Correct
Punishing	1	2	3	4	5	6	7	Rewarding

Page 5: Unaided Recall Question Set

Now, we would like to ask you a few questions about the content you just reviewed.

Amongst the news content you just reviewed, which articles do you remember? Please provide a very brief description or the story headline.

What brands do you remember being advertised alongside the media content you just reviewed? Please name as many as you possibly can.

What was the brand of the online environment you just reviewed?

What was the brand of swimsuit featured in the article you reviewed?

Please name one of the Olympic athletes featured in the article you just reviewed.

Who was the designer of the swimsuit featured in the article?

Which morning news show featured the new swimsuits described in the article?

What women's clothing item was the swimsuit compared to in the article?

Page 6: Aided Recall Question Set

Please answer the following questions to the best of your ability as they pertain to the news content that you just reviewed.

Which brands do you remember seeing within the news content? (Choose three)

- Dell
- LG Phone
- Synergy
- Verizon
- None of the above

Amongst the news content you just saw, which topic areas do you remember reviewing?
(Choose three)

- Sports
- Fashion
- Technology
- U.S. News
- Politics
- None of the above

What was the brand of the online environment you just reviewed?

- Google Reader
- Blogger
- Neither Google Reader or Blogger

What was the brand of swimsuit featured in the article you just reviewed?

- Nike
- Jansen
- Speedo
- Gortex
- None of the above

Please choose one of the Olympic athletes featured in the article you just reviewed.

- Michael Phelps
- Joe Smith
- Ryan Lotche
- None of the above were mentioned

Who was the designer of the swimsuit featured in the article?

- Speedo
- SwimTech
- Nike
- None of the above

Which morning TV news show featured the new swimsuits described in the article?

- Good Morning America
- Ellen Degeneres Show
- Regis & Kelly Show
- The Today Show
- None of the above

What women's clothing item was the swimsuit compared to in the article?

- Leggings
- Pantyhose
- A t-shirt
- A camisole
- None of the above

Page 7: Attitude Toward Online Environment Question Set (Part II)

Now, we would like to know your opinions about the online environment that you just navigated. Please answer the following questions as they pertain specifically to the information you just saw.

Did you find the online environment you just reviewed to be customized?

- Yes, it was highly customized
- No, it was not at all customized

Overall, what were your impressions of the online environment that you just reviewed?

- Dislike Very Much
- 2
- 3
- Neutral
- 5
- 6
- Like Very Much

To what degree did you feel that the online environment you just reviewed was customized?

- Not at all customized
- 2
- 3
- Neutral
- 5
- 6
- Very Customized

To what degree did you feel positively towards the online environment you saw?

- Not at all positive
- 2
- 3
- Neutral
- 5
- 6
- Very Positive

Overall, how well did you like the online environment you just saw?

- Did not like it at all
- 2
- 3
- Neutral
- 5
- 6
- Liked it very much

The news content I saw while reviewing the online environment was customized for me.

Strongly Disagree 1 2 3 4 5 Strongly Agree

The content I saw while reviewing the online environment was relevant to me.

Strongly Disagree 1 2 3 4 5 Strongly Agree

It was easy for me to relate the content of the news articles to my life.

Strongly Disagree 1 2 3 4 5 Strongly Agree

I enjoyed navigating my online environment.

Strongly Disagree 1 2 3 4 5 Strongly Agree

Page 8: Attitude Toward the Ad Question Set

Using the scales below, please indicate your agreement with the following statements as it pertains to the advertising in the online environment you just reviewed.

I liked the Synergy (keyword or banner) ad.

Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

The Synergy (keyword or banner) ad was entertaining.

Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

The synergy (keyword or banner) ad was useful.

Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

The Synergy (keyword or banner) ad was important.

Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

The Synergy (keyword or banner) ad was interesting.

Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

The Synergy (keyword or banner) ad was informative.

Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

I would enjoy seeing the Synergy (keyword or banner) ad again.

Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

The Synergy (keyword or banner) ad was good.

Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

Please rate Synergy Computers using the scale below.

Bad 1 2 3 4 5 6 7 Good

Please rate Synergy Computers using the scale below.

Unpleasant 1 2 3 4 5 6 7 Pleasant

Please rate Synergy Computers using the scale below.

Unfavorable 1 2 3 4 5 6 7 Favorable

Please rate Synergy Computers using the scale below.

Negative 1 2 3 4 5 6 7 Positive

Please rate Synergy Computers using the scale below.

Not Reputable 1 2 3 4 5 6 7 Reputable

Page 9: General Attitude Toward Information Aggregators Question Set

Now, we would like to gain a better understanding of your general attitude towards news content made available through information aggregators, such as Google Reader. Please answer the questions below to the best of your knowledge.

Information aggregators (i.e., Google Reader) as a source of news and information are:

Not Trustworthy

2

3

Neutral

5

6

Trustworthy

Information aggregators (i.e., Google Reader) as a source of news and information are:

Not Open-Minded

2

3

Neutral

5

6

Open-minded

Information aggregators (i.e., Google Reader) as a source of news and information are:

Bad

2

3

Neutral

5

6

Good

Information aggregators (i.e., Google Reader) as a source of news and information are:

Not Expert

2

3

Neutral

5

6

Expert

Information aggregators (i.e., Google Reader) as a source of news and information are:

Not Experienced
2
3
Neutral
5
6
Experienced

Information aggregators (i.e., Google Reader) as a source of news and information are:

Untrained
2
3
Neutral
5
6
Trained

Page 10: Behavioral Intention for Use of Customization Question Set

Using the scales below, please rate the probability that you would use a customized online environment (that you create) to manage and browse information online.

Unlikely	1	2	3	4	5	6	7	Likely
Nonexistent	1	2	3	4	5	6	7	Existent
Improbable	1	2	3	4	5	6	7	Probable
Impossible	1	2	3	4	5	6	7	Possible
Uncertain	1	2	3	4	5	6	7	Certain
Would Not Use	1	2	3	4	5	6	7	Would Use

Page 11: Behavioral Intention for Use of Advertising Question Set

Using the scales below, please rate the probability that you would click on the advertising you were exposed to during your browsing session of the online environment.

Unlikely	1	2	3	4	5	6	7	Likely
Nonexistent	1	2	3	4	5	6	7	Existent

Improbable	1	2	3	4	5	6	7	Probable	
Impossible	1	2	3	4	5	6	7	Possible	
Uncertain	1	2	3	4	5	6	7	Certain	
Would Not Use		1	2	3	4	5	6	7	Would Use

Page 12: Demographic Question Set

What is your current age?

- 18-21
- 22-25
- 26-30
- 31-35
- Over 35

What is your gender?

- Male
- Female

What college are you affiliated with at UT Austin?

- Architecture
- McCombs School of Business
- Communication
- Continuing and Extended Education
- Engineering
- Fine Arts
- School of Information
- Geosciences
- School of Law
- LBJ School of Public Affairs
- Liberal Arts
- Natural Sciences
- Nursing
- Pharmacy
- Social Work
- I am not affiliated with a college (Undeclared Major)

What is your current UT classification?

- Freshman
- Sophomore
- Junior
- Senior

5th year senior
Graduate student

What is your ethnicity?

African American
American Indian
Asian American
Caucasian
Hispanic American
Multiracial
International
Other (please specify in text box)

What is your current annual income?

Below \$20,000
\$20,000 - \$29,999
\$30,000 - \$39,999
\$40,000 - \$49,999
\$50,000 and above

Page 13: Email Address

Please provide your email address below so that we can properly link your responses to this survey with your experimental data.

F: RESEARCH PARTICIPATION REMINDER EMAIL

Subject Line:

Reminder: Research Participation Tomorrow (insert date)

Message Body:

Hello,

This is a reminder that you are currently signed up to complete an experiment tomorrow (Monday, 9/8) in the Media Lab in CMA 6.102 at 1 PM.

Before you arrive, please take a moment to complete the pre-survey:

http://www.surveymonkey.com/s.aspx?sm=I6KaId4UeKktq1aM_2fALBbw_3d_3d

Thanks and I look forward to seeing you tomorrow!

LB

Laura F. Bright

School: PhD Candidate, UT Advertising

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512-699-8218

G: ARTICLES USED IN ONLINE ENVIRONMENTS

Article # 1: Swimsuit for the Olympics Brings Fashion and Technology to the Pool (Test Article)

Publication Date: June 2008

Body of Article:

Ryan Lochte, an Olympic swimmer, said he felt like a superhero. Michael Phelps, who is expected to win multiple gold medals at the Beijing Games, said it was as if he were wearing a spacesuit. And this was after Phelps, promoting a slinky black unitard swimsuit, stood on a podium with his arms and legs splayed like Leonardo da Vinci's "Vitruvian Man."

It might have been a stretch to equate the latest, and supposedly fastest, swimsuit from Speedo, introduced at a news conference on Tuesday, to a Renaissance drawing that is considered to be the apotheosis of ideal proportions — a merger of science, art and nature. But then again, some people do get really excited about the slightest changes to the get-ups that swimmers wear at the Olympics.

Along with Phelps and Lochte, five other Olympic swimmers were on the stage in Midtown: Natalie Coughlin, Kate Ziegler, Dara Torres, Katie Hoff and Amanda Beard. They all stood silently in their suits like statues until Beard began to crack up. Four hours earlier, they had appeared even more awkward, seated on the set of NBC's "Today" show, where the lights cut through their translucent suits like X-rays.

In the audience at the news conference was Harold Koda, the chief curator of the Costume Institute at the Metropolitan Museum of Art. He is planning a show next year of conceptual fashion designs that fit into a theme of superheroes. Koda said he had approached Speedo to borrow the suit worn by Olympic athletes in 2004, but was asked by the company to hold off until now.

Speedo is also collaborating with the designer Rei Kawakubo of Comme des Garçons on a more colorful version for the Olympics, presumably in red, white and blue, but those will not be revealed until shortly before the Games. A basic version was also made available for purchase on Tuesday on Speedo's Web site, where advance orders were being taken for the \$550 swimsuits, expected for delivery in May.

For anyone who is not an employee of NASA, as were some of the people who developed the suit, it may be difficult to comprehend the difference between the suit, made of a paper-thin nylon and Lycra blend, and a great pair of L' Eggs. The most significant advancement claimed by Speedo is that it has 10 percent less "passive drag".

The new suit will be tested in competition this weekend at the Grand Prix series at the University of Missouri. The suit was streamlined by using fewer pieces and also by

bonding its seams with heat created by ultrasonic waves — a process akin to getting a filling at the dentist — thereby eliminating ridges created by overlapping pieces of fabric.

Flat may be fast, but it can also seem a little dull, it was suggested to Torres, the fastest female swimmer in the United States.

“You think it looks dull?” she said. “We’re there to swim fast. We’re not there for a fashion show.”

Article # 2: Survey Says U.S. Will Lag in Technology Growth

Publication Date: June 2008

Body of Article:

Watching television, gaining access to the Internet and listening to music on mobile phones will be a viable business in the next few years, says a study by a consulting arm of PricewaterhouseCoopers. But while marketers and advertisers have much to cheer in the coming digital revolution, the fastest growth will be in emerging markets, with the United States lagging behind.

Overall global consumer spending both online and by mobile phones is expected to grow 21.8 percent annually, to \$234 billion by 2012, according to the study which Pricewaterhouse expects to release Wednesday. By contrast, spending in the United States will grow at a rate of 16.1 percent, to \$75 billion. The firm said there was more opportunity for Internet and mobile entertainment growth in countries like India and China because people there would use phones as a primary source of entertainment.

The good news is that traditional media companies like Time Warner and NBC Universal have less to fear from new media competitors. Stefanie Kane, a partner in the entertainment, media and communications consulting firm, said old media companies would be big players in the digital revolution.

“The world is not going to change dramatically,” she said. “The established media companies will dominate revenues for the future.”

Of course, there will be some pain in the transition. Mobile and online advertising, which many had hoped would compensate for declines in traditional forms of print and broadcast advertising, has not grown as quickly as the industry has expected. And despite the colliding interests of Hollywood executives and technologists, the cultures are vastly different. “They are coming to the realization that they have to work together,” Ms. Kane said.

Indeed, several companies are already testing relationships. Last December, Nokia and the Universal Music Group agreed to offer unlimited, free downloads of Universal songs to buyers of certain Nokia mobile phones. In January, CBS and TiVo, which makes

digital video recorders, entered into a research partnership to figure out how to better advertise to consumers.

Partnerships, whatever the form, could not come soon enough. Worldwide mobile television subscriptions are expected to grow fivefold to \$19 billion, by 2012 compared with \$408 million last year, Pricewaterhouse said. The United States is expected to make up \$2.1 billion of that 2012 figure. And Pricewaterhouse expects that the online and mobile music distribution will surpass physical distribution by 2011, although music downloaded over the Internet is expected to grow at a greater percentage than music delivered over mobile phones.

Stock analysts expect media companies to benefit from the proliferation of so-called smartphones, like the BlackBerry or iPhone, which are minicomputers that consumers carry in their pockets. Of interest to many consumers is using the Internet while on the go. Spending here is expected to grow. According to Pricewaterhouse, both home computer and mobile Internet access in the United States will increase to \$69.3 billion in the next five years, from \$41.3 billion in 2007. The firm said it did not separate the two categories.

Article # 3: NASA Takes a Giant Leap in Space Fashion

Publication Date: June 2008

Body of Article:

When Neil Armstrong's boot touched the lunar surface, he was wearing Hamilton Standard gear. But when astronauts go back to the Moon, they will be changing their wardrobe — and their tailor, too.

The National Aeronautics and Space Administration announced last week that for the first time in more than 40 years, a new company would produce space suits for the next phase of the American space program. The suits are, as NASA likes to point out, complex spacecraft all their own, small ships that provide a livable environment in the harsh conditions of space.

It is a big moment for the space agency, which does not take fashion shifts lightly.

“We haven't developed a new E.V.A. suit in many years — since the 1970s,” said Doug Cooke, the deputy associate administrator of the next-generation space program, using the abbreviation for Extra-Vehicular Activity, NASA's phrase for spacewalking.

The surprise in the announcement was that Hamilton — now Hamilton Sundstrand, a division of United Technologies in Windsor Locks, Conn. — lost the contract to Oceaneering International Inc., a Houston company best known for its offshore oil and gas industry equipment. The contract could be worth up to \$745 million.

Astronauts currently have two suits: so-called pressure suits worn during launching and landing, and the bulkier suits for spacewalks. The new contract calls for a modular approach, and the suits for launching and entry and those for stepping out onto the lunar surface must share components, including the helmet, lower arms, legs and boots. The extravehicular suits will be designed not just for the weightless conditions of space, but also for walking on the Moon.

The current suits “were built for a completely different set of problems to solve,” said Glenn Lutz, the manager of the space suit project, in a briefing for reporters last week.

Astronauts who have performed spacewalks often say they expend a great deal of their effort “fighting the suit.” The new suits will have to be lighter than today’s 350-pound behemoths and provide greater flexibility in the legs.

“We’re ready to put them to work and to put bootprints back on the Moon,” Mr. Lutz said. He added, however, “we’ve got a long way to go to get there.”

H: CONSENT FORM FOR EXPERIMENT PARTICIPATION

You are being asked to participate in a research study. This form provides you with information about the study. Please read the information below and ask questions about anything you don't understand before deciding whether or not to take part. Your participation is entirely voluntary and you can refuse to participate without penalty or loss of benefits to which you are otherwise entitled.

Title of Research Study: An Analysis of Consumer Reactions to News Content

Principal Investigator: Laura F. Bright, PhD Candidate, Department of Advertising, University of Texas at Austin (512-471-1101) with faculty supervisor, Terry Daugherty, Ph.D., Department of Advertising, University of Texas at Austin (512-471-8917)

What is the purpose of this study?

This study seeks to gain insight into the development of online news environments by obtaining consumer opinions on the topic.

What will be done if you take part in this research study?

If you agree to participate in this study, you will be asked to navigate on a specific website and answer a series of questions regarding your reactions to the site. Your participation in this study should take no more than 30 minutes of your time.

What are the possible discomforts and risks?

You might experience anxiety or other emotional discomforts while reviewing a website related to recent news and answering related questions. You might also feel frustrated if the technology needed to complete the study does not work to your satisfaction. If you experience any emotional discomfort or stress during the study, you are free to skip questions or completely withdraw from the study at any time without penalty. You are encouraged to contact the Principal Investigators listed above about any concerns you have about this study.

What are the possible benefits to you or to others?

You can learn about your online navigation behavior. Additionally, your personal input for this study is important in providing insight to researchers seeking to develop effective online applications and environments.

If you choose to take part in this study, will it cost you anything?

It will cost you nothing to participate in this study.

Will you receive compensation for your participation in this study?

No monetary compensation for your participation will be provided. However, you may receive extra credit for the advertising course you are currently enrolled in.

What if you are injured because of the study?

If injuries occur as a result of the study activity, eligible University students may be treated at the usual level of care with the usual cost for services at the Student Health Center, but no payment can be provided in the event of a medical problem.

If you do not want to take part in this study, what other options are available?

Participation in this study is entirely voluntary. You are free to refuse to be in the study, and your refusal will not influence current or future relationships with The University of Texas at Austin.

How can you withdraw from this study and who should I call if I have questions?

If you wish to stop your participation in this research study for any reason, you should contact: Laura F. Bright at (512) 471-1101 or Dr. Terry Daugherty at (512) 471-8917. You are free to withdraw your consent and stop participation in this research study at any time without penalty or loss of benefits for which you may be entitled. Throughout the study, the researchers will notify you of new information that may become available and that might affect your decision to remain in the study. In addition, if you have questions about your rights as a research participant, please contact The University of Texas at Austin Institutional Review Board for the Protection of Human Subjects, (512) 232-4383.

How will the privacy and the confidentiality of your records be protected?

Authorized persons from The University of Texas at Austin and the Institutional Review Board have the legal right to review your research records and will protect the confidentiality of those records to the extent permitted by law. If the research project is sponsored then the sponsor also has the legal right to review your research records. Otherwise, your research records will not be released without your consent unless required by law or a court order. If the results of this research are published or presented at scientific meetings, your identity will not be disclosed.

Will the researchers benefit from your participation in this study?

The researchers will not benefit from your participation except for presenting and publishing the results.

You have been informed about this study's purpose, procedures, possible benefits and risks. You can ask questions before you proceed to the study or at any time during the

session by contacting one of the researchers indicated above. Please contact Laura F. Bright if you wish to request a copy of this form. Only if you voluntarily agree to participate in this study, please sign below and proceed to your experiment station for further instructions.

Important: You must complete the entire survey and provide the requested personal information in order to receive class credit for completing this survey.

Signed: _____

Printed Name: _____

FOR RESEARCHER USE ONLY

Condition: _____ Time Started: _____ Initials: _____

Date: _____

I: DESCRIPTIVE STATISTICS FOR STUDY SAMPLE

Age			
	Frequency	Percent	Cumulative Percent
18 - 21 years	178	75.1	75.1
22 - 25 years	44	18.6	93.7
26 - 30 years	3	1.3	94.9
31 - 35 years	9	3.8	98.7
Over 35	3	1.3	100
Total	237	100	

Gender			
	Frequency	Percent	Cumulative Percent
Male	63	26.6	26.6
Female	174	73.4	100
Total	237	100	

UT Austin College Affiliation			
	Frequency	Percent	Cumulative Percent
Business	4	1.7	1.7
Communication	189	79.7	81.4
Fine Arts	3	1.3	82.7
Liberal Arts	31	13.1	95.8
Natural Sciences	6	2.5	98.3
Undeclared	4	1.7	100
Total	237	100	

Grade Classification at UT Austin			
	Frequency	Percent	Cumulative Percent
Freshman	30	12.7	12.7
Sophomore	2	0.8	13.5
Junior	31	13.1	26.6
Senior	137	57.8	84.4
5th Year Senior	25	10.5	94.9
Graduate	12	5.1	100
Total	237	100	

Ethnicity			
	Frequency	Percent	Cumulative Percent
African American	14	5.9	5.9
American Indian	1	0.4	6.3
Asian American	21	8.9	15.2
Caucasian	159	67.1	82.3
Hispanic American	32	13.5	95.8
Multiracial	5	2.1	97.9
International	5	2.1	100
Total	237	100	

Income Level			
	Frequency	Percent	Cumulative Percent
Below \$20,000	208	87.8	87.8
\$20,000 - \$29,999	7	3	90.7
\$30,000 - \$39,999	7	3	93.7
\$40,000 - \$49,999	2	0.8	94.5
\$50,000 and above	13	5.5	100
Total	237	100	

Dependent Measures Used in Data Analysis					
Indices	Valid Cases	Mean	Std. Deviation	Range	
Media Enjoyment	237	37.81	6.78	43	
Customization Attitude	237	28.1	6.88	38	
Beh. Intent for Customization	237	28.86	8.38	36	
Beh. Intent for Ad Engagement	237	16.02	7.77	36	
Unaided Recall	237	5.16	1.45	7	
Aided Recall	237	6.38	1.12	6	
Modified Unaided Recall	237	5.1	1.42	7	

Independent Measures Used in Data Analysis					
Indices	Valid Cases	Mean	Std. Deviation	Range	
Desire for Control	237	39.72	4.95	28	
Information Overload	237	20.04	5.46	31	
Gen. Self Efficacy	237	54.78	7.02	41	
Information Efficacy	237	45.69	6.32	29	

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Vita

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