

International Journal of Mobile Marketing

An Official Publication of the Mobile Marketing Association

Special Section: Mobile Marketing in Canada

Summer 2013

VOL. 8, NO. 1

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EDITOR'S LETTER

Michael Hanley, Associate Professor, Ball State University

Editor's Note: *In this issue of the IJMM we revisit mobile marketing in Canada in a Special Section of articles, case studies and commentaries. This special section would not have been possible without the assistance of Sandra Singer, Vice-President of Research, Councils and Content Development at the Canadian Marketing Association, who assisted with author submissions and coordinated distribution to CMA members, and the CMA Board of Directors.*

In This Issue

Jay (Hyunjae) Yu investigates young consumers' responses to mobile ads that use different types of interactivity: consumer-message interactivity, consumer-marketer interactivity, and consumer-consumer interactivity. The results indicate that young consumers have significantly different attitudes (positive or negative) toward mobile ads with different levels of interactivity.

Archana Kumar and **Avinandan Mukherjee** adopt an integrative approach by combining TAM and TRI to predict attitudes toward mobile shopping and purchase behavior through mobile devices. The authors argue that user personality traits toward technology influence user perception toward mobile shopping, which in turn impact user attitudes toward mobile shopping leading to purchase behavior.

Huan Chen, Fang Liu and **Tingting Dai** explore Chinese consumers' perceptions of smartphones and marketing information on smartphones. Their findings indicate that Chinese consumers' interpretations are largely shaped by their previous experiences with computer usage. The study also reveals multiple barriers to mobile marketing on smartphones in China

The paper by **Wenjing Xie, Yunze Zhao** and **Wenya Xie** examines how the interface design of hand-held devices influences mobile advertising effectiveness among college students in China. Results indicate that the interface design will foster a positive emotion, increase students' arousal upon receiving mobile ads, and increase purchase intention.

Ketaki Bhawe, Varsha Jain and **Subhadip Roy** attempt to comprehend Gen Y's attitude toward in-app advertising and branded applications in India. Results show that Gen Y's attitude to in-app advertising were influenced by involvement with the app, hindrance caused by the ad, screen size, contextualization, personalization, relevance, credibility, permission, control and incentives.

The recent increase in lawsuits related to the 1991 Telephone Consumer Protection Act and what the FCC can do to reduce the litigation are the focus of an article by **Monica Desai, Ryan King, Maria Wolvin** and **Maxine Martin**. The authors suggest that the FCC must clarify the meaning of "capacity" under the TCPA by taking into account today's technology.

Special Section: Mobile Marketing in Canada

The mobile marketing industry in Canada has matured to a level that no longer sees mobile as an afterthought - neither is mobile driven by hype. We are all witnessing the profound effects of mobile in every industry, in each business function, in all strategic discussions and most of all - as consumers in everyday life.



Canada maintains a strong digital underpinning that predisposes the uptake of mobile. We have one of the highest smartphone and tablet penetration rates in the world. We have some of the best creative and digitally oriented minds in the planet. We also provide attractive tax and technology grant incentives that foster innovation. Canada is at the forefront of mobile and we are extremely fortunate to be part of this age of discovery.

Presented in this Special Section of the IJMM, published especially for Canadians, are case studies and articles that reflect the sophistication and maturity of mobile in Canada. We are witnessing more and more **content** being consumed through mobile devices, often where the mobile/tablet device is the primary consumption screen. We are seeing increasing levels of **commerce** in its various forms, such as: pre-shopping, "showrooming," carrier and OEM storefronts, credit card enabled m-commerce and eventually NFC. Given the increased attention to mobile we're also witnessing an increasing emphasis on user experience design and the role of **context** with respect to mobile.

Brady Murphy
Chair, Mobile Marketing Council
Canadian Marketing Association
Vice-President Mobile Strategy
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About the Canadian Marketing Association:

The Canadian Marketing Association embraces Canada's major business sectors and all marketing disciplines, channels and technologies. Its 800-plus members encompass all facets of marketing and represent consumer and business-to-business marketers and agencies. These organizations make a major contribution to the economy driving the sale of nearly \$30 billion in goods and services each year and employment for more than one million Canadians. CMA helps shape the future of marketing in Canada. It is the leading provider of marketing education and the marketing community's principal advocate on key public policy issues affecting both consumer and business-to-business marketers.

ABOUT THE MOBILE MARKETING ASSOCIATION (MMA)

The Mobile Marketing Association (MMA) is the premier global non-profit trade association representing all players in the mobile marketing value chain. With more than 700 member companies, the MMA is an action-oriented organization with global focus, regional actions and local relevance. The MMA's primary focus is to establish mobile as an indispensable part of the marketing mix. The MMA works to promote, educate, measure, guide and protect the mobile marketing industry worldwide. The MMA's global headquarters are located in the United States and it has regional chapters including North America (NA), Europe, Middle East and Africa (EMEA), Latin America (LATAM), and Asia Pacific (APAC) branches. For more information, please visit www.mmaglobal.com.

MMA members include agencies, advertisers, hand held device manufacturers, carriers and operators, retailers, software providers and service providers, as well as any company focused on the potential of marketing via mobile devices.

ABOUT THE MMA ACADEMIC OUTREACH COMMITTEE

The MMA Academic Outreach Committee (AOC) is chartered with establishing a bridge between the mobile industry and academia. Scholars investigating mobile phenomena provide industry participants with meaningful insights based on theory and research, while industry participants provide scholars with real-world experience and data. The committee encourages an environment within the industry for the sharing of meaningful theory, methods and data between scholars and practitioners alike in order to increase the available body of knowledge on the topic of mobile marketing and to encourage industry growth.

ABOUT THE INTERNATIONAL JOURNAL OF MOBILE MARKETING

The MMA International Journal of Mobile Marketing (MMA-IJMM) is regularly published twice per year (Summer and Winter) by the Mobile Marketing Association. Special issues are also published. The IJMM includes articles from academics, students, as well as mobile industry experts and thought leaders.

ARTICLE SUBMISSION GUIDELINES

Individuals interested in submitting articles (4,000 – 5,000 words) should submit their draft or prospectus to the MMA. Submissions should be emailed in MS Word format. For more information, please contact mmajournal@mmaglobal.com or visit:

<http://www.mmaglobal.com/node/1863>

Issue	Submission deadline
Winter 2013	September 15, 2013
Summer 2014	March 15, 2014
Winter 2014	September 15, 2014

International Journal of Mobile Marketing, Vol. 8, No. 1

Published by the Mobile Marketing Association and the
MMA Academic Outreach Committee.

ISSN 1939-1161

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Mission of the International Journal of Mobile Marketing

The MMA-IJMM is dedicated to helping the industry understand the emergence of the mobile channel and its use for marketing. Contributions to the journal come from academics, industry experts and thought leaders. Contributing articles are conceptual, qualitative, and quantitative in nature and add to the growing body of knowledge within the field of mobile marketing.

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Design and Production:

The Digital Policy Institute and the Institute for Mobile Media Research at
Ball State University.

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YOU'VE GOT MOBILE ADS! YOUNG CONSUMERS' RESPONSES TO MOBILE ADS WITH DIFFERENT TYPES OF INTERACTIVITY

Jay (Hyunjae) Yu

Abstract:

This exploratory study investigates young consumers' responses to mobile ads that use different types of interactivity: consumer-message interactivity, consumer-marketer interactivity, and consumer-consumer interactivity. The results indicate that young consumers have significantly different attitudes (positive or negative) toward mobile ads with different levels of interactivity. In other words, companies should reconsider their optimistic view that consumers will welcome all types of mobile ads. The responses from some participants even indicate that they not only dislike mobile ads, but also sometimes dislike the brand of the mobile ad.

Keywords: mobile advertising, interactivity, consumers' attitudes toward advertising and brand

INTRODUCTION

The tremendous proliferation of mobile phones and other mobile devices has provided a new channel to deliver commercial messages for a variety of products and services, such as entertainment, leisure, travel, telecommunication, and retail (Internet Advertising Bureau, 2010). Given the substantial growth of mobile commerce, marketers have acknowledged the importance of mobile ads as an important advertising format. In fact, the phenomenal penetration of mobile phones in the United States (87%) has provided the platform for the growing popularity of mobile ads (Centers for Digital Information, 2013). Kagan (2007) predicted that the penetration of mobile phones in the United States would be close to 100% in the upcoming years. Unsurprisingly, the use of mobile ads is predicted to become more popular than ever, not only in America but also across the world (Mobile Marketing Association, 2007). In 2010, global mobile ad spending was projected to top \$1.5 billion, up 42% from \$871 million in 2006 (Shabelman, 2007). Beyond the traditional channels for mass advertising, most of the

mobile ads are targeted at the highly coveted young demographic, particularly those between the ages of 18 and 34, who are likely to use their phones for a variety of functions, such as playing games and instant messaging (Harris Interactive, 2005; Peters, Amato, & Hollenbeck, 2007).

Mobile ads can be defined as text- and graphics-based commercial messages that are sent to consumers via mobile devices, including cellular phones, pagers, and personal digital assistants (PDA) (Peters et al., 2007; Soroa-Koury & Yang, 2010). More specifically, there are different types of mobile ads, including Short Messaging Service (SMS) (e.g., text messages of 160 characters or less), Multimedia Messaging Service (MMA, 2009) (e.g., rich text and multimedia messages that include images, audio, and/or video), mobile web banner ads, and full-screen interstitials (Peters et al., 2007). These diverse types of mobile advertisements have enabled marketers to deliver advertising messages to potential consumers via mobile devices.

However, researchers have pointed out the necessity of a discussion on the effects of advertising

conveyed through mobile devices since a large number of advertisers are applying many different types of mobile advertisements (Gao, Rau, & Salvendy, 2009). Recent studies have focused on technology related issues of mobile advertising (Saladow, 2012; Li & Du, 2012) rather than on the effects regarding the influence of receivers' attitude toward the mobile advertising itself, the brand advertised, and the products advertised. Some researchers indicated that there is a need to talk about how the factors in mobile advertising actually positively affect consumers' attitude and (or) purchase intentions for the products advertised (Nittala, 2011). The factors discussed regarding the effects of mobile advertisements include users' product involvement (Drossos & Fouskas, 2010), type of message service sent to users (short message service versus multi-media services) (Koo, Knight, Yang, & Xiang, 2012), some design attributes of mobile advertising (Chen & Hsieh, 2012), kinds of products advertised (Ma, Suntornpithug, & Karaatli, 2009), and devices in mobile advertising for consumers' privacy concerns (Hardt & Nath, 2012). Therefore, some researchers indicated the need for more diverse discussions regarding as to how and what we can guarantee in order to produce better effects of mobile advertising (Kolsaker & Drakatos, 2009). Due to the plethora of different types of mobile advertisements and strong competition among mobile ads, there is a clear need for research dealing with the effects of mobile advertising (Nittala, 2011).

In this study, among many factors that could possibly influence the effects of mobile advertising, the author focuses on the interactivity that consumers experience through diverse elements in mobile advertising, such as specific messages or some functions that users find (Gao et al., 2009). In marketing and advertising literature, interactivity has been shown to be an important driver in consumer acceptance of mobile ads (Gao et al., 2009; Drossos, Giaglis, Lekakos, Kokkinaki, & Stavnaki, 2007; Bauer,

Barnes, Reichardt, & Neumann, 2005). According to Kannan, Chang, and Whinston (2001), the key characteristic of advertising on mobile phones is "ubiquitous interactivity." Since mobile phones are portable, personal, and nearly always on (Barnes, 2002), they enable the recipient of a message to reply to it immediately, thereby establishing a direct dialogue between marketers and their potential consumers (Bauer et al., 2005).

Given the ubiquitous nature of the mobile technology and the subsequent growth in demand for mobile content, the advent of mobile advertising has opened up the possibility for marketers to reach an individual consumer in the correct place, at the perfect time, and in an interactive way (Peters et al., 2007). Although prior research has acknowledged the importance of interactivity in determining the effectiveness of mobile ads (e.g., Gao et al., 2009; Drossos et al., 2007), no research, to date, has examined how different types of interactivity impact consumer responses to mobile ads.

Therefore, the primary purpose of this study is to investigate young consumers' attitudes toward mobile ads using different types of interactivity, guided by the work of Cho and Chen (2005). The interactivity types are *consumer-message interactivity*, *consumer-marketer interactivity*, and *consumer-consumer interactivity*. The current research will contribute to a broader theoretical foundation on the effects of interactivity for wireless advertising and will also attempt to identify what mobile interactivity strategies are most effective for mobile ads.

BACKGROUND

Popularity of Mobile Ads

Today, more than 326 million consumers in the United States own mobile phones (CTIA: The Wireless Association, 2013). This number of mobile phone users is the most important reason as to why more and more companies are using mobile advertising as one

of their marketing tools (Park, Shenoy, & Salvendy, 2008). Since consumers carry their mobile phones almost everywhere, many companies are pouring more of their marketing budgets into different types of mobile advertising (Sora-Koury & Yang, 2010). Furthermore, mobile ads could be useful compared to other advertising media options for maximizing the chances to communicate with a captive audience (Ferris, 2007). The debut of the smartphone has become another driver for many companies to consider mobile ads as a major advertising tool as well (Indvik, 2010). According to JiWire's survey (2010), more than half of smartphone users surveyed said that they acted on an advertisement in an application. Furthermore, about 20% of the users who acted on a mobile ad said that they purchased a product advertised in a mobile ad sent to their smartphones in the past few months. These survey results indicate that companies are investing more of their marketing budgets in mobile advertising than ever before (JiWire, 2010; Pew Internet and American Life Research Project, 2010).

In addition to the popularity of mobile ads, there are predictions regarding potentially bigger growth of mobile ads in the future. The survey by JiWire (2010) indicated that about half of the survey participants were willing to provide their locations in order to receive location-based mobile ads. The survey indicated that consumers have a different psychology regarding ads when they are exposed to ads at home and while traveling; they often react more favorable to ads when they are on the go; and that people generally are more receptive to advertising through their mobile devices.

Mobile advertising has been limited compared to other traditional advertising media options in terms of diversity, creativity, and use. However, more diverse types of mobile ads are being used in sales promotions, event marketing, branded content marketing, and customer relationship marketing; these mobile ads are

based on the characteristics of real-time connectivity and interactivity with consumers (Pew Internet and American Life Research Project, 2010).

Another benefit for companies using mobile advertising as a marketing tool is that it saves money compared to other forms of advertising (Cian, 2009). Sending mobile ads to consumers is often much cheaper than conducting more traditional advertising activities (MobiADNews, 2010). This financial advantage of mobile advertising over other more traditional advertising media has been noted not only in several media reports but also by mobile advertising organizations, such as the Mobile Marketing Association (MMA).

Consumer Responses to Mobile Ads

Despite the popularity of mobile ads across the world as well as the overall optimism about mobile ads' positive effects on consumers, there has been a relative lack of empirical research investigating consumers' attitudes toward mobile ads (Park et al., 2008). Most of the research has been focused in the area of consumer surveys conducted from companies' perspectives, not from an academic viewpoint (Yu & Cude, 2009). In particular, where consumers' general advertising avoidance is widespread (Kelly, Kerr, & Drennan, 2010), there has not been enough discussion about how consumers feel about different types of mobile ads (Yu & Cude, 2009a).

Prior research has indicated the need for conducting more structured research in order to understand consumers' attitudes and beliefs toward mobile ads so that companies would be able to know if consumers are positively or negatively viewing the ads (Okazaki, Katsukura, & Nishiyama, 2007). A 2009 report from the Federal Trade Commission brought up concerns about the intrusiveness of mobile ads because consumers might feel uncomfortable about the ads being sent directly to their personal mobile devices (FTC, 2009). Consumers could also feel annoyed by receiving mobile ads because they did not

give prior permission to the companies to send them the mobile ads (Gurau, Ranchhod, & Gauzente, 2003). Barnes and Scornnavacca (2004) found that user permission is one of the most important variables affecting the effectiveness of mobile advertising. Prior permission contributes to consumers' positive attitudes toward mobile ads as well to the brands or products advertised. However, many companies ignore these concerns and often send their mobile advertisements without the permission of users (Yu & Cude, 2009b). Therefore, the optimism that companies have regarding the positive effects of mobile ads should be reconsidered and examined from diverse perspectives (Andrews, 2006).

Despite the mobile ads that generally include customized messages with tangible benefits (e.g., coupons, special sales events) for specific consumers, some scholars have noted the possible negative effects of customized messages and have speculated as to whether the negative effects might offset the positive ones (Phelps, D'Souza, & Nowak, 2001; Sacirbey, 2000; Sheehan, 1999). For instance, Tsang, Ho, and Liang (2004) found that consumers generally have negative attitudes toward SMS-based mobile ads unless they had specifically consented to receive the ads. However, obtaining prior consent is not a common practice of many companies who conduct mobile advertising. Furthermore, researchers confirmed that there is a direct association between unfavorable consumer attitudes and behavioral intention to receive mobile ads (e.g., bad image about the brand advertised and losing the intention to buy the product in the future). In short, researchers suggested that companies should not send mobile advertising messages without consumers' prior permission (Tsang, et al., 2004).

A recent wave of interest in advertising research has stimulated debates as to whether mobile ads violate consumers' privacy rights. In fact, consumer privacy concerns might be a key factor influencing the

effectiveness of interactive advertising (Miyazaki & Fernandez, 2000; Sheehan & Hoy, 1999; Yu & Cude, 2009b). In the context of online advertising, Sheehan and Hoy (1999) found that online consumers' concerns regarding privacy are correlated with consumer actions in order to protect their privacy. As privacy concern increases, consumers are likely to provide incomplete information when registering for websites, notifying Internet service providers (ISPs) about unsolicited e-mail, requesting removal from mailing lists, and sending highly negative messages to online companies that are sending unsolicited e-mail. Consumers also are less likely to provide personal information to organizations. Leppäniemi and Karjaluoto (2005) revealed that consumers tend to fear invasion of their privacy in mobile advertising, suggesting that concern about privacy is one of the most significant obstacles to successful mobile advertising.

According to a UPI-Zogby International Poll (2007), more than 90% of the participants from diverse countries were concerned about their privacy and the possibility of identity theft. In this situation where people do not want to share their personal information, including the numbers of their mobile phones, personalized e-mail or mobile ads could become less effective if consumers view them as an invasion of their privacy (Gurau et al., 2003; Sheehan, 1999). However, despite consumers' privacy concerns, many companies continue to send mobile ads since some mobile ads are actually beneficial (Park et al., 2008).

Applying the Role of Interactivity to Mobile Ads

Are there ways to design mobile ads so that consumers can feel more comfortable and accept them more easily? Among several recommendations, some researchers have pointed out that if companies apply interactivity wisely to mobile ads, it would be possible for consumers to view mobile ads more favorably (Lustria, 2006), which is a major interest of

the present study. Mobile ads can increase the possibility of interactivity since they allow companies to receive immediate and direct feedback from consumers. According to a study by Leppäniemi and Karjaluoto (2005), even though consumers did not provide prior permission to receive mobile ads on their mobile phones, they were willing to accept the messages and even respond favorably to the mobile ad if they felt the mobile ad's interactivity was appropriate.

Even though there are possibly several reasons for consumers not to welcome mobile ads, there are several factors that companies can control in order to increase the possibility of consumers accepting mobile ads, such as decreasing advertising intrusiveness and getting prior permission before sending mobile ads (Kennedy, 2006). Therefore, using effective interactivity features in mobile ads could be a crucial factor for consumers not to have negative reactions to the mobile ads sent to them (Tsang, et al., 2004).

Interactivity has been suggested by several previous studies, including research by Cho and Cheon (2005), as one of the characteristics that could help people to feel favorably toward mobile ads. Depending on how the appropriate types of interactivity are applied in mobile ads, consumers' attitude toward not only the ads themselves, but also to the products and brands advertised, could be significantly different (Yu, Paek, & Bae, 2008).

Conceptualizing Interactivity

Interactivity in the advertising field has been defined differently in various studies. Blattberg and Deighton (1991) defined interactivity as the facility with which people and organizations communicate directly with one another regardless of distance or time. Interactivity has also been defined as "the extent to which users can participate in modifying the format and content of a mediated environment in real time" (Steuer, 1992, p. 84). While these definitions are somewhat narrow, Liu and Shrum (2002) expanded

the definition of interactivity to "the degree to which two or more communication parties can act on each other, on the communication medium, and on the messages and the degree to which such influences are synchronized" (p. 54).

As an extension of these researchers' conceptions, Cho and Leckenby (1997) proposed three dimensions of interactivity on websites: user-machine interaction, user-user interaction, and user-message interaction. User-machine interaction is human interaction with a computer that is close to the traditional meaning of interaction. A computer system must be responsive to users' actions in order to be interactive. User-user interaction is a type of interpersonal communication that can be created by computer-mediated functions (e.g., chatting and newsletters). The more functions for communication among users, the more interactive the communication. The third dimension of interactivity is user-message interaction, which was limited in traditional media. However, online users have much more freedom in controlling the messages they receive and customizing the messages according to their preferences.

Based on Cho and Leckenby's (1997) dimensions, Cho and Cheon (2005) developed a new dimension of interactivity in their content analysis of corporate websites across many countries. They defined interactivity as "the degree to which consumers engage in marketing processing by actively interacting with marketing communication messages, with marketers, and with other consumers" (2005, p. 102). The dimensions of interactivity applied in their content analysis of websites, which are used for this present study, are (1) consumer-message interactivity, (2) consumer-marketer interactivity, and (3) consumer-consumer interactivity (Cho & Cheon, 2005).

First, consumer-message interactivity refers to users' interactions with advertising messages. This kind of interactivity could be more realized when websites have a larger quantity of information. By

editing, manipulating, and searching for information, consumers are likely to interact with advertising messages on the Internet as well as on the mobile phone. In the domain of interactive marketing, for example, consumer-message interactivity includes a consumer's use of keyword search functions, multimedia features, virtual reality display on the site, and a product choice helper (Cho & Chen, 2005).

The second dimension of interactivity, consumer-marketer interactivity, is a two-way interaction between users and marketers. Different from the consumer-message interactivity, this interactivity involves the direct roles of advertisers in interaction with their target audience (Cho & Leckenby, 1997). Some examples of consumer-marketer interactivity include consumer feedback to marketers, participation in a consumer satisfactory survey, and a request of the problem diagnostics. Users can experience this type of interactivity by using the "Q&A" functions or by exchanging e-mails with different companies.

The last dimension of interactivity is consumer-consumer interactivity, which involves interpersonal interaction among consumers. Users can interact with each other by participating in various user-oriented interactive functions, such as online discussions, chat rooms, and social network communities, not mediated by third parties (e.g., marketers) (Cho & Chen, 2005).

Research Questions

Drawing upon the categorization of interactivity suggested by Cho and Cheon (2005), the current research attempts to examine consumer attitudes toward mobile ads, the brands in the ads, and the purchase intentions for the products advertised based on different types of interactivity. While a growing body of research has suggested that interactivity plays a positive role in consumer attitudes toward Internet-based and mobile ads (e.g., Cho & Cheon, 2005; Lustria, 2006), there is a paucity of research examining the effectiveness of various types of interactivity on consumer responses to mobile ads. Given that the

popularity of mobile ads has been very recent, earlier research evidence is too scarce and inconclusive to enable the authors to formulate specific research hypotheses. Thus, the following research questions are proposed.

RQ1: Will consumer-message interactivity lead to more favorable attitudes toward mobile ads, attitude toward the brand, and greater purchase intentions compared to the control condition (no interactivity)?

RQ2: Will consumer-marketer interactivity lead to more favorable attitudes toward mobile ads, attitude toward the brand, and greater purchase intentions compared to the control condition (no interactivity)?

RQ3: Will consumer-consumer interactivity lead to more favorable attitudes toward mobile ads, attitude toward the brand, and greater purchase intentions compared to the control condition (no interactivity)?

RQ4: Which type of interactivity is most effective in affecting consumers' attitudes toward mobile ads: attitude toward the brand or purchase intentions?

METHOD

Experimental Design

To answer the series of research questions, this study planned to conduct a web-based experiment since the present research investigates people's attitude toward mobile advertisements, which are hypothetically sent to each participant. Therefore, the author tried to provide a better situation for the participants where they could feel they actually received mobile advertisements in the experiment. This study recruited college students who are considered to be the major targeted customers of diverse mobile marketing methods. The participants were randomly assigned to one of the four manipulated treatments where four different mobile advertisements were used (applying no interactivity, consumer-message interactivity, consumer-marketer interactivity, consumer-consumer interactivity)

Table 1: Four different scenarios used in the experiment

<p>Scenario 1: No Interactivity is involved in the mobile ad Control Group 1 Please assume that you received a mobile advertisement to your mobile phone. The mobile ad includes nothing but text-based advertising messages, such as “Hyper-Online Mart is having a special sales event this week. Every product will be on sale from 40% to 70%!” The mobile ad also recommends that you stop by www.hyperonline-mart.com to see if a product you want is available during this sales event.</p>
<p>Scenario 2: Consumer-Message Interactivity is involved in the mobile ad Group 2 (Making consumers click the hyperlink) Please assume that you received a mobile advertisement to your cell phone. In addition to the basic text-based advertising messages regarding the sales event at the www.hyperonline-mart.com, the mobile ad also contains the information that “you could download 5 hot new free music files if you click the hyperlink on the last line of the advertising messages.”</p>
<p>Scenario 3: Consumer-Marketer Interactivity is involved in the mobile ad Group 3 (Making consumers send e-mails to companies) Please assume that you received a mobile advertisement to your mobile phone. In addition to the basic text-based advertising messages regarding the sales event at the www.hyperonline-mart.com, the mobile ad also includes the information that “you could get a special right to enter a fantastic drawing event which awards several free gifts. Just send your information as an e-mail to this address (hypermart_drawing@hypermart.com).”</p>
<p>Scenario 4: Consumer-Consumer Interactivity is involved in the mobile ad Group 4 (Making consumers communicate with other consumers) Please assume that you received a mobile advertisement to your mobile phone. In addition to the basic text-based advertising messages regarding the sales event at the www.hyperonline-mart.com, the mobile ad also includes the information that “you could get an online coupon which is equivalent to one accessory to decorate your mobile phone. Also, with a simple clicking, the mobile ad leads you to a cyber space where you can meet with other friends virtually and possibly exchange online coupons (for accessories) with others.”</p>

(between-subjects design). This study was conducted using a factorial design instead of the survey method since it investigates people’s reactions and attitude toward mobile ads. Through the collection of data employing a factorial design, it was possible to efficiently estimate the main effects. The participants in the control group were exposed to a scenario, providing a story in which the people were given a mobile ad with no interactivity (Table 1). The people in the other groups were exposed to different stimuli pertaining to a specific scenario that consisted of a hypothetical situation where a consumer received a

specific type of interactive mobile ad (consumer-message interactivity, consumer-marketer interactivity, consumer-consumer interactivity).

Scenario Creation

To examine how different types of interactivity influence young consumers’ reactions to mobile ads, the authors employed a scenario-creation method with different types of interactivity. This method was used because delivering the mobile ad stimulus to each participant could not be carried out. Practically, it was difficult to obtain the mobile phone numbers from participants and deliver mock mobile ads using

different types of interactivity. In addition, the scenario method has been widely used in advertising research (e.g., An & Bergen, 2007). Four different types of scenarios were created based on the dimensions of perceived interactivity proposed by Cho and Chen (2005) (Table 1).

Participants and Procedures

College students were recruited from three introductory mass communication classes at a southeastern U.S. university. The age of the participants ranged from 19 to 27. This age group is one of the most active consumer groups who are more exposed to many types of advertisements and are more influenced by advertising content than other consumer groups (Fleming, Thorson, & Atkin, 2004). More importantly, they are one of the major targeted consumers for mobile advertisements (Jin & Villegas, 2007; Pew Internet and American Life Research Project, 2010). Even though teenagers could have a higher rate of using WiFi (wireless Internet) on their mobile phones, the young adult consumer groups have been more important targets of mobile advertising due to their better financial resources compared to teenagers (Christopherson, 2010).

All subjects received an e-mail invitation with the URL of the web-based experiment. At the beginning of the experiment participants were asked to read a scenario-based stimulus and complete a questionnaire designed to evaluate their attitudes toward the mobile ad, brand, and future purchase intention toward the product advertised. They were debriefed after the instruments were collected.

Pre-Manipulation Check

Prior to conducting the main experiment, the authors checked to see if different types of interactivity were successfully manipulated in each scenario. A pretest was conducted using a total of 30 undergraduate students from the same population, but not included in the main experiment group. On the first page of the questionnaire the brief purpose of the

pilot test and the definition of the three interactivities (consumer-message, consumer-marketer, and consumer-consumer) were explained. After reading the paragraph showing the conceptualization of each type of interactivity, participants were asked to turn to the next page in which one of the four scenarios was written. The participants in each group were asked if a specific interactivity was appropriately applied in the scenario. Using a 5-point Likert scale, they were asked to check one of the five options regarding the scenario given to them. A three-item manipulation check measure was utilized to test if the scenarios were applying the three different types of interactivities correctly. Participants were asked if they agree or disagree to the following: mobile ads in the scenarios focused on “interacting with the advertising message,” “interacting with the marketer,” and “interacting with the other consumers” on a 5-point Likert scale involving various degrees of agreement or disagreement. Three different scenarios were given to all participants and they were then asked to show the extent of their agreement to the following statements: “I think this scenario is showing how consumers interact with the messages in the mobile ad,” “I think this scenario is showing how consumers interact with the marketer who is conducting this mobile ad,” and “I think this scenario is showing how consumers interact with the other consumers for this mobile ad.”

The results of this manipulation check indicated that each scenario had its own characteristics that are significantly different from others. Regarding the first scenario, participants’ answers for the first statement (i.e., “I think this scenario is showing how consumers interact with the messages in the mobile ad”) were significantly higher than those of the other two statements ($M = 4.80$, $SD = .421$, $df = 2$, $p < .05$). The second scenario (consumer-marketer interactivity) also attained significantly higher agreement scores in the statement indicating that the scenario showed how consumers are interacting with the marketer who

is conducting the mobile ad ($M = 4.30$, $SD = .674$, $df = 2$, $p < .05$). The significantly higher agreement was anchored as well to the statement, "I think this scenario is showing how do consumers interact with the other consumers for this mobile ad" regarding the third scenario ($M = 4.20$, $SD = .788$, $df = 2$, $p < .05$). In conclusion, the authors confirmed that the three scenarios were appropriate for the main experiment.

Dependent Variables

The 5-point Likert scale that included statements about consumers' attitudes toward mobile ads,

attitudes toward brands, and purchase intentions toward the products advertised (Table 2) was adopted and used by several previous studies (Holbrook & Batra, 1987; Shamdasani, Stanaland, & Tan, 2001; Lee, 2000; Lee & Mason, 1999; Coyle & Thorson, 2001; Kim & Biocca, 1997; Putrevu & Lord, 1994). Subjects were asked to indicate their responses (measured with a 5-point Likert scale that included the responses *Strongly Disagree/Disagree/Neither Agree or Disagree/Agree/Strongly Agree* to each of the following statements.

Table 2: Statements measuring the attitudes toward mobile ads, brands, and the purchase intentions toward products

Items for Investigating Consumers' Attitudes Toward the Mobile Ads

- (1) I think I will dislike this mobile ad.*
- (2) I think I will like this mobile ad.
- (3) I think I will react unfavorably to this mobile ad.*
- (4) I think I will react favorably to this mobile ad.
- (5) I think I will feel negatively towards this mobile ad.*
- (6) I think I will feel positively towards this mobile ad.
- (7) I think I will believe this mobile ad is bad.*
- (8) I think I will believe this mobile ad is good.

Items for Investigating Consumers' Attitudes Toward the Brands Advertised

- (9) It is very likely that I will buy the brand/product shown in this mobile advertisement.
- (10) I will purchase the brand/product shown in this mobile advertisement the next time I need one.
- (11) I will definitely try the brand/product shown in this mobile advertisement.
- (12) If a friend calls me to get my advice in his/her search for a product, I will recommend that he/she should buy the brand/product I saw in this mobile advertisement.

Items for Investigating Consumers' Purchase Intentions Toward the Products Advertised

- (13) The brand in this mobile ad is likely to possess the stated ad claims.
- (14) I will react to the brand I saw in this mobile ad.
- (15) I will feel positively toward the brand in this mobile ad.
- (16) I will dislike the brand in this mobile ad.*

*The answers for some statements were reverse-coded for data analysis.

RESULTS

Initially, we sent invitation e-mails to from 257 to 295 participants per group, depending on the size of the class. However, the actual respondents numbered between 225 to 230 per group. In addition, there were

some questionnaires in which more than 80% of the statements were skipped; these were excluded from the final data analysis. Therefore, the number of the questionnaires finally used for data analysis totaled 880 across the four groups (Table 3). The age range of

Table 3: Participants in each group

Groups	Invitation E-mails Sent Originally	Response Rate (%)	Non-Usable Questionnaires	The Numbers Used for the Data Analysis
No Interactivity Control Group 1	257	87.5	5	220
Consumer-Message Interactivity Group 2	288	78.1	9	216
Consumer-Marketer Interactivity Group 3	285	79.6	5	222
Consumer-Consumer Interactivity Group 4	295	77.9	8	222

the participants was 19–27 years old and 64% of the participants were female (598 participants).

In order to compare the means of the participants' agreements to the 16 statements from the four different groups, a series of analysis of variance (ANOVA) was conducted. The results found that the four groups had significantly different means (Table 4). The Control Group/Group1 (no interactivity

was involved in the mobile ad) had the lowest mean score and the group in which the consumer-message interactivity was applied (a mobile ad using a hyperlink enabling consumers to download free music files) had the highest mean. This difference meant that the participants in Group 2 showed the most positive attitude toward the mobile ad.

Table 4: Means of the participants' agreement with the 16 statements

Groups	N	Mean
No Interactivity/Control Group 1	220	2.58
Consumer-Message Interactivity/Group 2	216	3.07
Consumer-Marketer Interactivity/Group 3	222	2.68
Consumer-Consumer Interactivity/Group 4	222	2.98

*Higher mean indicates a more positive attitude toward the mobile ad. Some statements were reverse-coded. Therefore, the participants in Groups 2 and 4 showed the most positive attitude toward the mobile ads.

Next, using ANOVA and post hoc tests (Bonferroni method), the author checked to see if the three different types of interactivities caused positive effects on three different types of consumers' responses (attitudes toward the mobile ads, attitudes toward the brands, and purchase intentions toward the products advertised) in order to answer the first three research questions. Regarding RQ1 (about consumer-message

interactivity), it was found that the participants in Group 2, in which the consumer-message interactivity was applied, showed higher agreement scores in the attitude toward the mobile ad, the attitude toward the brand, and the purchase intentions toward the product compared to those in the control group with no interactivity. The mean differences in the three categories were all significant ($p < .05$) (Table 5).

Table 5: Effects of interactivities

Categories	Group	Group/ Compared	Std. Error	Sig
Attitude Toward the Mobile Ads	1. Control/No Interactivity Mean: 2.51	2. Consumer-Message Interactivity Mean: 3.20	.08176	P<.05
		3. Consumer-Marketer Interactivity Mean: 2.93	.08121	P<.05
		4. Consumer-Consumer Interactivity Mean: 3.08	.08121	P<.05
	2. Consumer-Message Interactivity Mean: 3.20	1. Control Group/No Interactivity Mean: 2.51	.08176	P<.05
		3. Consumer-Marketer Interactivity Mean: 2.93	.08158	P<.05
		4. Consumer-Consumer Interactivity Mean: 3.08	.08158	P<.05
	3. Consumer-Message Interactivity Mean: 2.93	1. Control Group/No Interactivity Mean: 2.51	.08121	P<.05
		3. Consumer-Message Interactivity Mean: 3.20	.08158	P<.05
		4. Consumer-Consumer Interactivity Mean: 3.08	.08102	-
	4. Consumer-Consumer Interactivity Mean: 3.08	1. Control Group/No Interactivity Mean: 2.51	.08121	P<.05
		2. Consumer-Message Interactivity Mean: 3.20	.08158	-
		3. Consumer-Marketer Interactivity Mean: 2.93	.08102	-
Attitude Toward the Brands Advertised	1. Control/No Interactivity Mean: 2.43	2. Consumer-Message Interactivity Mean: 2.75	.07473	P<.05
		4. Consumer-Consumer Interactivity Mean: 2.70	.07422	P<.05
	2. Consumer-Message Interactivity Mean: 2.75	1. Control Group/No Interactivity Mean: 2.43	.07473	P<.05
		3. Consumer-Marketer Interactivity Mean: 2.64	.07456	P<.05
		4. Consumer-Consumer Interactivity Mean: 2.70	.07456	P<.05
	3. Consumer-Marketer Interactivity Mean: 2.64	1. Control Group/No Interactivity Mean: 2.43	.07422	P<.05
		2. Consumer-Message Interactivity Mean: 2.75	.07465	-
		4. Consumer-Consumer Interactivity Mean: 2.70	.07405	-
	4. Consumer-Consumer Interactivity Mean: 2.70	1. Control Group/No Interactivity Mean: 2.43	.07422	P<.05
		2. Consumer-Message Interactivity Mean: 2.75	.07456	-
		3. Consumer-Marketer Interactivity Mean: 2.64	.07405	-

Purchase Intentions Toward the Products Advertised	1. Control/No Interactivity Mean: 2.87	2. Consumer-Message Interactivity Mean: 3.15	.06533	P<.05
		3. Consumer-Marketer Interactivity Mean: 3.02	.06488	-
		4. Consumer-Consumer Interactivity Mean: 3.05	.06488	P<.05
	2. Consumer-Message Interactivity Mean: 3.15	1. Control Group/No Interactivity Mean: 2.87	.06533	P<.05
		3. Consumer-Marketer Interactivity Mean: 3.02	.06518	-
		4. Consumer-Consumer Interactivity Mean: 3.05	.06518	-
	3. Consumer-Marketer Interactivity Mean: 3.02	1. Control Group/No Interactivity Mean: 2.87	.06488	-
		2. Consumer-Message Interactivity Mean: 3.15	.06518	-
		4. Consumer-Consumer Interactivity Mean: 3.05	.06474	-
	4. Consumer-Consumer Interactivity Mean: 3.05	1. Control Group/No Interactivity Mean: 2.87	.06488	P<.05
		2. Consumer-Message Interactivity Mean: 3.15	.06518	-
		3. Consumer-Marketer Interactivity Mean: 3.02	.06474	-

On the other hand, it was found that consumer-marketer interactivity prompted a different result than the consumer-message interactivity (RQ2). Even though Group 3 participants, who were exposed to the mobile ad using consumer-marketer interactivity, showed significantly higher agreements in terms of attitudes toward the mobile ad itself and the brand advertised ($p<.05$), the mean difference of the agreement in the purchase intention toward the product advertised between the control group (no interactivity) and Group 3 (consumer-marketer interactivity) was not significantly different (Table 5).

Regarding RQ3, it was found that the participants who experienced the mobile ad with consumer-consumer interactivity (Group 4) provided significantly higher agreement scores in all three categories (attitude toward the mobile ad, attitude toward the brand, and purchase intention toward the product)

than the agreement scores for the people in the control group ($p<.05$).

Lastly, the author investigated which type of interactivity was most effective in influencing consumers' attitudes toward mobile ads, attitude toward the brand, and purchase intention (RQ4). Based upon the results in Table 5, it was confirmed that consumer-message interactivity was more effective compared to other interactivities in engendering participants' positive responses, even though the results were somewhat different depending on the category (attitudes toward mobile ads, attitude toward the brand, and purchase intentions toward the product). In terms of attitudes toward the mobile ads, the mobile ad applying consumer-message interactivity engendered most favorable responses among the participants. However, the mean of the agreement scores in Group 2

(consumer-message interactivity) were significantly higher than those in Group 1 (control group) and Group 3 (consumer-marketer interactivity), but not in Group 4. There was no significant difference between the mean score in Group 2 and in Group 4 (consumer-consumer interactivity), even though the score in Group 2 was higher than that in Group 4 (3.20 vs. 3.08) (Table 5).

Regarding people's attitude toward the brand advertised, the people in Group 2, who were exposed to a mobile ad using consumer-message interactivity, had higher agreement scores compared to other groups. A significant difference was found only in comparison with Group 1 (control group). Even though the agreement score in Group 2 was higher than in the other two groups (Group 3, consumer-marketer interactivity and Group 4, consumer-consumer interactivity), the differences were not statistically meaningful.

Similar results were also found in terms of participants' purchase intentions in the future toward the product advertised. It was clear that consumer-message interactivity was the most effective factor influencing the participants' purchase intentions. However, the differences in the agreement scores were significant between Group 1 (control group) and Group 2 (consumer-message interactivity) only. The differences in the agreement scores between Group 2 and the other two groups (Group 3, consumer-marketer interactivity and Group 4, consumer-consumer interactivity) were not significant.

DISCUSSION

The results of this study clearly demonstrate that the agreement scores from the participants of the control group/Group 1 (the people who were exposed to a mobile ad consisting of simple text-based ad messages; no intended interactivity was applied) attained the lowest means (the most negative attitude), and the mean differences with all other

groups were statistically significant. In other words, when people get a mobile ad with just text advertising messages with no interactivity, they generally have a very negative attitude toward the mobile ad. In addition to the attitude toward the ad, the attitude toward the brand advertised and the intentions to consider purchasing the product in the near future were also negatively impacted by that style of mobile ad. Based upon the results, sending text-based mobile ads without any type of interactivity could cause negative responses to the ad, the advertised brand, and to the purchase intentions toward the product seen in the ad. Therefore, even though many companies use text-based mobile ads mainly because they are cheap and convenient, they should be aware that their mobile ads could result in serious problems that are opposite to the expected results of the companies.

On the other hand, applying some types of interactivity (particularly consumer-message interactivity and consumer-consumer interactivity) in mobile ads positively influenced people's attitudes toward the ad, the product, and the brand advertised. As indicated in the results, the participants who received a scenario assuming that people enjoyed consumer-message interactivity (being provided with a clickable hyperlink by which people could download popular music files for free) attained the highest mean score among the groups. This could imply that if a company uses consumer-message interactivity appropriately, consumers could accept the mobile ad more favorably and show a very positive attitude not only toward the mobile ad itself, but also toward the brand and the products. It was found that using the interactivity appropriately could even affect consumers' purchase of the product advertised in the near future. In addition to the usage of consumer-message interactivity, applying consumer-consumer interactivity in mobile ads, such as leading the people to go to a virtual social space where consumers meet

each other and exchange the free online coupons sponsored by the company, also could cause a very positive attitude toward the mobile ad, the products, and the brand. There have been current studies indicating that some levels of interactivity the receivers experience from mobile advertisements could positively influence their attitudes toward the ad itself, brand and product, similar to the present study. If mobile advertisements could provide opportunities for consumers (receivers) to establish some relationship with the sponsor through diverse tools such as e-coupons or other prizes (Gao et al., 2009), it will be more possible for people to have a positive attitude toward the advertising and the brand (Grainge, 2011). Some studies have indicated that in order for mobile advertising to be more effective it should provide informativeness and credibility, which are very important factors; moreover, in traditional advertising formats, current studies have discussed the possible factors which are related to the interactivity for producing more effective mobile advertising (Gao et al., 2009), such as having a response mechanism to users' requests (Yang, Kim, & Yoo, 2012) as well as functions for making conversations between senders and users (Shankar, Venkatesh, Hofacker, & Naik, 2010).

Therefore, the insights from the results in this study seem to be straightforward. If companies want to effectively communicate with consumers without annoying them, it seems that they should use mobile ads with some type of an interactive function, such as attaching clickable hyperlinks so that consumers could download some free items, like popular music files for free (consumer-message interactivity). Even though the scenario used in this study did not specify the style of music the consumers could receive through hyperlinks attached to the advertising messages (i.e., what music, whose music, coloring or not, etc.), participants absolutely showed the most positive reactions to this mobile ad.

However, applying any type of interactivity may not be the best answer in all cases for grabbing consumers' attention. Among the three types of interactivity, consumer-marketer interactivity was comparatively less effective (i.e., awarding a right to enter a drawing for free gifts) than the other two types of interactivity used in mobile ads. Through closely observing the two types of mobile ads that received a more positive response from the participants, it could be seen that people are fond of interactivity with convenience (consumer-message interactivity; for example, the only thing consumers need to do is to click a couple of times in order to get free music files) and interactivity that builds relationships with other consumers virtually (a mobile ad leading people to a free chatting space where many consumers meet each other and exchange items they received from the company). Therefore, based upon the results of this study, companies should consider these questions seriously when they plan mobile ads:

"Can this mobile ad be used conveniently by consumers and can consumers do something that requires minimal effort in order to enjoy the interactivity planned by the companies (e.g., get some offers from the company), such as a couple of clicks?"

"Can this mobile ad promote consumers to communicate with other consumers (e.g., meeting each other, talking about the brand and the product, etc.) in a virtual space sponsored by the companies?"

LIMITATIONS AND RECOMMENDATIONS

Although the study's findings provide valuable insights into the role of interactivity in mobile ads, the limitations of the current research should be acknowledged. First, the author developed detailed scenarios that went through manipulation checks by a pilot test and were provided to the participants who were asked to imagine that they were getting one of the four types of mobile advertisements using

different levels of interactivity. The study investigated the participants' attitude toward the mobile ad, the product, and the brand by providing hypothetical scenarios, instead of actually sending mobile ads to their cell phones. Therefore, the results from the present study are limited to the participants' perceptions rather than to the actual behavioral changes. A future study should consider a more practical experiment in which real mobile advertisements are sent to participants so that they could show more real responses to the stimuli. The results might be different from those in the present study. With the help of advanced experiment technology, sending actual mobile ads to participants' real mobile phones and observing how they behave will produce more interesting findings.

The second limitation of the present study concerns the participants. According to the results from the 2010 Pew Internet and American Life Project, teenagers are a major consumer group for using and enjoying mobile ads across many products and brands because they are more sensitive to diverse types of interactivity than other groups, even though college students (young adults) who were participants in this study are another major consumer group. Therefore, a validity issue regarding the selection of a more appropriate sample could be discussed based upon the literature above, indicating that teenagers, rather than young adults, have more experience with diverse mobile ads. However, the author chose the young adult group for the study because using teenagers was not seen as a good idea since they lacked financial resources, and one of the dependent variables in this study was purchase intention. A future study should use teenagers as participants since they are a consumer group who will soon have financial resources.

Acknowledgement: This work was supported by the Sogang University Research Grant of 2011 (201110024.01).

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SHOP WHILE YOU TALK: DETERMINANTS OF PURCHASE INTENTIONS THROUGH A MOBILE DEVICE

Archana Kumar, Avinandan Mukherjee

Abstract:

As mobile devices become ubiquitous in consumers' lives they are starting to play a major role in consumers' shopping experiences. However, the relatively slow off-take in mobile purchasing has perplexed researchers. Research in marketing and retailing has predominantly focused on consumer characteristics to predict mobile shopping without considering the interdependencies between user personality, perceptions and attitudes toward technology in general and mobile shopping in particular. This study adopts an integrative approach by combining TAM and TRI to predict attitudes toward mobile shopping and purchase behavior through mobile devices. The authors argue that user personality traits toward technology influence user perception toward mobile shopping, which in turn impact user attitudes toward mobile shopping leading to purchase behavior. The study not only demonstrates support for this three-stage process, but also identifies key personality and perception variables that marketers could use to segment and target consumers that have a greater proclivity toward mobile shopping.

Keywords: mobile shopping, perceptions, personality traits, attitude, purchase behavior, TAM, TRI

INTRODUCTION

The unprecedented technological development in mobile devices, mobile computing and mobile web has resulted in significant growth of mobile commerce, which refers to one- or two-way exchange of value facilitated by a mobile device (MMA, 2010). In the context of retailing, mobile commerce encompasses shopping via Internet-enabled mobile devices (i.e., smartphones and tablets) that is rapidly emerging as a new retail channel. Many customers use their mobile devices in several ways to initiate shopping or enhance traditional shopping experiences. For example, consumers use mobile phones to research product information, check or compare prices, access a store's mobile application to get information about the store, check product availability, and to get coupons through mobile devices. In spite of such widespread uses of mobile device for shopping related experiences, the biggest challenge for retailers has been encouraging

customers to complete the purchase through the mobile device. In other words, there is a perceptible gap in consumers' usage of mobile devices for shopping related experiences and direct purchase via a mobile device.

Market research indicates that shoppers used their smartphones and tablets to make nearly \$25 billion in purchases in 2012 (Musil, 2013), but mobile device induced traditional sales (i.e., research on a mobile device leading to purchase from another channel) is expected to be close to \$600 billion in the next four years (Deloitte, 2012). Mobile phones influence 5.1% of all in-store retail sales and contribute to 10% of total e-commerce sales. Further, the shopping cart abandonment rate for mobile devices is an astounding 97%, while that of online shopping is around 47% (SeeWhy, 2012). This indicates that those shopping using a computer are more likely to complete the purchase through the same device

while mobile shoppers are likely to complete their purchase elsewhere. These statistics point a finger to the fact that mobile devices are contributing significantly to sales through other channels. In other words, mobile devices play a major role in inducing in-store and/or online sales rather than being the primary purchase medium. Therefore, this study aims to understand the effect of individual traits that have an impact on the perception of mobile shopping which then leads to attitude and behavior.

Though mobile shopping has generated a lot of excitement within the retail industry, only a small group of users actually purchase through their mobile devices. Purchasing through mobile devices is still riddled with several shopper-centric external and internal barriers. Some of the external constraints include factors such as smaller screen size, lack of consistent Internet access, and slow and unwieldy mobile shopping sites. These external barriers can be overcome as technology improves, but it is the internal or psychological barriers that need to be understood by marketers in order to develop effective mobile strategies. Though in their infancy, mobile devices have a strong potential to become a mainstream retail shopping channel. Though there are several studies pertaining to mobile shopping adoption in Asia and Europe (e.g., Bouwman, Carlsson, Castillo, & Walden, 2007; Ko, Kim, & Lee, 2009; Yang, 2005), there are only a few studies to date that aim to understand the adoption process of mobile shopping and purchase in the United States. (Yang, 2010). An empirical investigation of mobile shopping perceptions and intention to purchase using a mobile device taking into account the individual traits of the customer is still needed. Hence, the purposes of this study are to a) assess the effect of individual traits toward technology on perceptions toward mobile shopping, b) to assess the effect of perceptions toward mobile shopping on attitude toward mobiles shopping, and c) to assess the effect of attitude toward mobile

shopping on intention to purchase using a mobile device. With control and information within the finger's reach of customers, retailers need to leverage their mobile commerce strategies in order to become an integral part of the customer's multi-channel shopping experience. The following sections outline the theoretical background pertaining to technology readiness and acceptance followed by hypotheses development. These are followed by discussions on the methodology, data analyses, results, and implications. The paper ends with identification of limitations and future research possibilities.

THEORETICAL BACKGROUND

This study links user personality traits toward technology, user perception toward mobile shopping, user attitude toward mobile shopping, and purchase behavior through mobile devices. The Technology Acceptance Model (TAM) is one of the most widely used theoretical frameworks that addresses user acceptance or rejection of a new technology (Davis, Bagozzi, & Warshaw, 1989). Mobile shopping is a technology process that involves an active interaction between user and technology. Due to this high involvement, the traditional TAM might not sufficiently explain consumers' mobile shopping attitude and purchase behaviors. Hence, a model incorporating user-centric variables is necessary to identify the inherent differences in individuals that lead to different perceptions toward a technology. This study integrates the construct of technology readiness (TR) with TAM to better explain consumers' intentions to engage in mobile shopping. This integrated model is called Technology Readiness and Acceptance Model (TRAM) and has been incorporated by several studies to address the issue of consumer adoption of new technologies (Lin, Shih, & Sher, 2007; Walczuch, Lemmink, & Streukens, 2007). A brief discussion about TR and TAM is provided in the following sections.

Technology Readiness Index (TRI)

Rogers (1995) stated that there are inherent differences in people's outlook toward using technology. This entails that any individual would view technology in a certain manner depending on his/her personality trait. TRI is a framework characterizing an individual's beliefs about various aspects of technology (Parasuraman, 2000). It should be noted that TRI reflects a set of beliefs about technology but does not measure the individual's competence in technology. The TRI framework consists of the following personality traits:

- Optimism: a positive belief that technology offers increased control and efficiency to one's life.
- Innovativeness: a tendency to be the first to use a new technology.
- Discomfort: requiring a need for control and a sense of being overwhelmed by new technology.
- Insecurity: a tendency to distrust technology due to security and privacy issues.

Individuals with high TRI levels score high on optimism and innovativeness since they feel more comfortable and are more accepting of new technology without asking for proof of its performance. On the other hand, people with low TRI levels score high on discomfort and insecurity since they are more speculative and uncomfortable with new technology.

Technology Acceptance Model (TAM)

The TAM is a widely accepted theory that aims to understand how users accept and use a new technology. The original TAM was designed specifically to explain computer usage and behavior but has since been adopted to explain technology use in various contexts. The original TAM incorporated two variables, perceived usefulness and perceived ease of use, to determine an individual's attitude and intention to use a system (Davis, 1989). Perceived usefulness refers to

the "degree to which a person believes that using a particular system would enhance his or her job performance" (Davis, 1989, p. 320); and perceived ease of use refers to the "degree to which a person believes that using a particular system would be free of effort" (Davis, 1989, p. 320). These perceived characteristics are expected to influence the intention to use the technology, which in turn influences actual use of technology.

The TAM has been extended to append the original model with other constructs suitable to the specific technology under study. For example, within the retail industry, the TAM has been widely adopted to predict consumer intentions to use online shopping (e.g., Ha & Stoel, 2009; Vijayasathy, 2004) and consumer acceptance of mobile payment (Chen, 2008) by adding constructs such as perceived trust, security, and privacy.

Integrated Framework: Technology Readiness and Acceptance Model (TRAM)

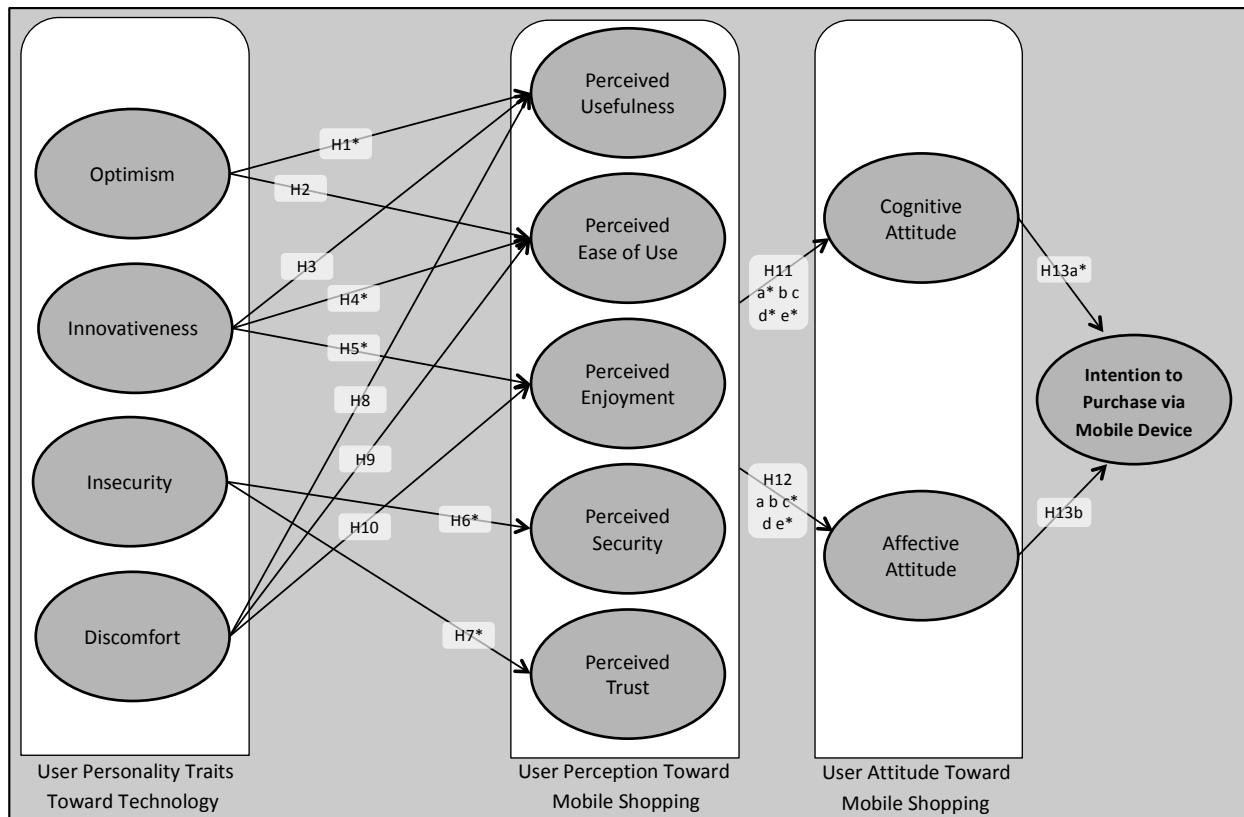
In this research, a combination of TAM and TRI was considered to offer greater insights into the purchase intentions using a mobile device. When consumers are offered a choice, they first search from memory for available information to assess the present choice offerings (Bettman, 1979). This past experience-based evaluation is relevant in the context of new technology adoption. Novice consumers tend to first scan their internal memory about general beliefs on technology in order to develop their perceptions about the new technology in question (Bettman & Sujaan, 1987). This is the basis of the Technology Readiness and Acceptance Model (TRAM) first proposed by Lin et al. (2007). TRAM merges the general personality dimensions of TRI with technology-specific dimensions of TAM in order to explain how personality traits can influence the way people interact with and adopt the technology under study. In this study, the TRAM model is employed to investigate how personal traits of individuals have an

impact on their perceptions toward mobile shopping. The study also aims to understand the role of these perceptions on the cognition and affect toward mobile shopping and purchase behavior using a mobile device.

HYPOTHESES DEVELOPMENT

Based on the theoretical framework of TRI and TAM, and exploratory research using focus group interviews, this study developed the conceptual model shown in Figure 1.

Figure 1: The research model with hypotheses (* indicates significant relationships)



Optimism → Perceptions

Individuals who have optimistic tendencies toward technology in general are believed to hold positive perceptions toward new technology. These individuals believe that technology can increase their efficiency and are not intimidated by new technologies (Parasuraman & Colby, 2001; Tsikriktsis, 2004). Extending this logic to mobile shopping, it could be hypothesized that when an individual has higher optimism toward technology, they would embrace mobile shopping and perceive mobile shopping to be easy to use and useful in their day-to-day life. Hence,

H1: High personal optimism about technology in general will lead to higher perceived usefulness of mobile shopping.

H2: High personal optimism about technology in general will lead to higher perceived ease of use of mobile shopping.

Innovativeness → Perceptions

Individuals who consider themselves to be innovative about technology in general are usually early adopters and have less complex belief sets about new technology. Such individuals also believe that opportunities to try a new technology should not be missed because they have a positive impression of a

technology's usefulness in general. They also enjoy interacting with new technologies and believe them to be entertaining (Karahanna, 1999). Extending these observations to mobile shopping, it can be stated that individuals with a high level of innovativeness will consider shopping through a mobile device to be easy, useful, and entertaining. Hence,

H3: High personal innovativeness about technology in general will lead to higher perceived usefulness of mobile shopping.

H4: High personal innovativeness about technology in general will lead to higher perceived ease of use of mobile shopping.

H5: High personal innovativeness about technology in general will lead to higher perceived enjoyment of mobile shopping.

Insecurity → Perceptions

Insecurity or apprehensiveness leads to avoiding a particular technology because of the innate fear associated with technology in general (Kwon & Chidambaram, 2000). The reason for this fear might be inherent skepticism about new technologies and a feeling that new technologies might be complicated. Individuals who are insecure about using technology are also more concerned with privacy and security issues. Mobile shopping is a relatively recent phenomenon and there are several perceived factors, such as inefficient mobile storefronts, poor Internet connectivity through a mobile device, fear of losing the device, and fear of compromising personal information, that make it difficult for such individuals to shop through a mobile device. Lu and Su (2009) found anxiety to be a negative predictor of a customer's intentions to use mobile phones. Therefore, we hypothesize that individuals with high insecurity toward technology will have distrust toward using mobile devices for shopping because of the privacy and security concerns. Hence,

H6: High personal insecurity toward technology in general will lead to lower perceived security of mobile shopping.

H7: High personal insecurity toward technology in general will lead to lower perceived trust toward mobile shopping.

Discomfort → Perceptions

Individuals who have high discomfort toward technology suffer from a perceived lack of control and are overwhelmed by technology. These individuals consider technology to be complex and therefore less easy to use. They also believe that technology can make things worse rather than easy to use which then leads to a displeasure while using the technology (Walczuch et al., 2007). Consumers' lack of self-perception of mobile skillfulness can significantly cause anxiety and reduce perceptions of enjoyment and usefulness (Lu & Su, 2009). With respect to mobile shopping, individuals who are uncomfortable with technology in general may be averse to using a mobile device for shopping. Hence,

H8: High personal discomfort toward technology in general will lead to lower perceived ease of use.

H9: High personal discomfort toward technology in general will lead to lower perceived usefulness of mobile shopping.

H10: High personal discomfort toward technology in general will lead to lower perceived enjoyment of mobile shopping.

Perceptions → Attitudes

Attitude refers to a learned predisposition to react in a favorable or unfavorable manner to an object, event, or stimulus (Fishbein & Ajzen, 1975). Attitudes develop over time as people gain experience with the object or obtain information about the object from other sources. The formed attitude then stimulates positive or negative behaviors toward the object. Attitude is a multidimensional construct with cognitive, affective, and behavioral components (Fishbein & Ajzen, 1975). The cognitive component

refers to what a person knows about an object (e.g. knowing that mobile shopping is a convenient way for shopping). The affective component concerns the extent to which an individual likes or dislikes the object (e.g., knowing that mobile shopping leads to enjoyment). Lastly, the behavioral component pertains to the behavioral intention, covert or overt actions toward the object. A person's knowledge (cognition) and liking (affect) of the object influence his/her behavior toward the object. The link between perceptions and attitude has been supported by researchers who assert that attitude toward an object is a function of perceptions about the object (Fishbein, 1963). In the case of mobile shopping, we hypothesize that perceived usefulness, ease of use, enjoyment, security, and trust will lead to the development of attitude toward mobile shopping.

Perceived usefulness is the individual's view that the usage of a technology will lead to specific rewards. The TAM suggests that individuals accept a technology if they believe in its positive performance and usefulness (Davis, 1989). Mobile shopping offers several rewards to consumers such as convenience, immediate access to information about products or services, and ubiquity. Perceived ease of use refers to the degree to which a user believes that using the technology will be free of effort. Several studies have examined the influence of perceived ease of use of a technology on attitude (e.g., Agarwal & Prasad, 1999; Venkatesh, 1999). In order for mobile shopping to gain more popularity the shopping process needs to be easy and intuitive. When a user perceives a technology to be easy to interact with and use it leads to positive perceptions toward the technology. Perceived enjoyment is the view that the technology offers an element of fun and enjoyment to the user. Smartphones and tablet devices provide diverse media to the user such as pictures, background music, videos, and animations (Lu & Su, 2009). Such media offers a fun mobile atmosphere for customers while

shopping. Therefore, a customer who perceives mobile shopping to be an enjoyable process will have a positive attitude toward mobile shopping.

While usefulness, ease of use, and enjoyment are benefits, technology systems also come with certain risks. In the context of electronic commerce, security risk and trust has been found to be a major factor that inhibits its adoption (McCole, Ramsey, & Williams, 2010). This concern is further aggravated in the case of mobile devices because they have been primarily used for communication. Mobile shopping requires the user to reveal their personal and financial information through their mobile device and users might be concerned about this. Users might also be concerned with losing their mobile devices and there might be a concern of the mobile device landing in the wrong hands. Therefore, perceived security and trust could play a significant role in the attitude toward mobile shopping. The social psychology literature states that attitude has two components, cognitive and affective (Bagozzi & Burnkrant, 1985). In this study, we relate perceptions toward mobile shopping to have significant effect on both cognitive and affective attitude. Based on the above discussion, the following hypotheses are proposed between perceptions and attitude toward mobile shopping.

H11: High degree of (a) perceived usefulness (b) perceived ease of use (c) perceived enjoyment (d) perceived security and (e) perceived trust will lead to positive cognitive attitude toward mobile shopping.

H12: High degree of (a) perceived usefulness (b) perceived ease of use (c) perceived enjoyment (d) perceived security and (e) perceived trust will lead to positive affective attitude toward mobile shopping

The traditional TAM uses behavioral intention toward the technology in question as the dependent variable (Van der Heijden, 2003). Behavioral intention is defined as the possibility that an individual will use the technology under study (Schierz, Schilke, & Wirtz, 2010). The antecedent to behavioral intention is the

attitude toward using the technology (Muk & Babin, 2006). Researchers have identified both cognitive and affective components of attitude to have an impact on intention to use the system (Weiss & Cropanzano, 1996). This linkage between cognitive and affective attitude toward behavior is important to explore in the context of mobile shopping because of the lack of understanding of why mobile shopping does not necessarily lead to purchase through the same device. Hence, we hypothesize the following between attitude toward mobile shopping and intention to purchase through a mobile device.

H13: Positive (a) cognitive and (b) affective attitude toward mobile shopping will lead to positive intention to use a mobile device for shopping.

METHODOLOGY

This study uses a survey methodology to test the research hypotheses. A theoretically grounded questionnaire was developed to test the antecedents and consequences of perceptions toward mobile shopping. The following sections describe the exploratory research, sample design, instrument development, and survey procedures.

Exploratory Research to Develop Dimensions of TRAM

As mobile shopping is a relatively new research area with insufficient empirical work in the literature, a qualitative approach using focus group interviews was chosen to explore perceptions toward mobile shopping. Focus group interviews have been accepted as an appropriate method for exploratory studies (Calder, 1977) and have been employed to understand consumer perceptions in the context of mobile services (Jarvenpaa & Lang, 2005). The focus group participants were students at a public university in the northeastern United States. Respondents were selected from three different groups: 1) a junior-level undergraduate class in marketing (n = 9); 2) a

graduate-level class in communications (n = 8); and 3) members of a professional honors society (n = 15).

The focus group discussion delved into how, when, and why participants engaged in mobile shopping. They were also steered toward discussing their perceptions toward shopping through a mobile device, and their motivations and inhibitions of purchasing through a mobile device. The results of the focus group discussion indicated that consumers perceived mobile shopping to be useful and a fun way to shop. However, participants felt uncomfortable with mobile shopping due to security concerns and lack of trust in the shopping process. Based on the focus group, it was pertinent to incorporate the following constructs in order to understand perceptions toward mobile shopping: a) perceived usefulness, b) perceived ease of use, c) perceived enjoyment d) perceived security and e) perceived trust. Further, these five constructs have been validated in the literature (Ha & Stoel, 2009; Mukherjee & Nath, 2007).

Sample

Since college-aged consumers contribute significantly to the growing number of mobile shoppers (Swerdlow, 2012), the survey was conducted among undergraduate students at the same university as the focus groups. A total of 300 questionnaires were distributed to students out of which 289 responses were found to be usable after discarding incomplete surveys.

The mean age of respondents was 23 with ages ranging from 18 to 45; nearly 80% of respondents were within the age range of 18 to 25 years. Nearly 85% of the respondents were Caucasians and nearly 65% were females. All of the respondents owned a mobile phone with 98% owning either a smartphone or a tablet. Nearly 65% of the respondents had used their mobile device for researching and browsing while nearly 40% had used their mobile device to purchase a product or service. Of those who had

purchased through their mobile device, a majority had purchased either tickets, books, or apparel.

The scale items to measure the proposed constructs were adopted from the literature. All items other than demographic information were measured on a Likert-type scale with responses ranging from “Strongly Agree” (5) to “Strongly Disagree” (1). The four constructs of technology readiness (i.e., optimism, innovativeness, insecurity, discomfort) were measured using the refined technology readiness index scale developed by Lin and Hsieh (2012) based on Parasuraman’s Technology Readiness Index (2000). All the scale items for perceptions toward mobile shopping were adopted from past studies and adapted to reflect the context of mobile shopping. The scale items to measure perceived usefulness and perceived ease of use were adopted from Davis (1989). The scale items to measure perceived enjoyment were adopted from the work of Van Der Heijden (2004), while the scale items to measure perceived security and trust were adopted from the works of Schierz et al. (2010) and Mukherjee and Nath (2007), respectively. Scale items to measure cognitive and affective attitude toward mobile shopping were adopted from Yang and Yoo (2004). The scale items to measure intentions to purchase using a mobile device were adopted from Lu and Su (2009). Table 1 provides sample scale items for each construct.

DATA ANALYSIS

Before performing empirical analysis, data were checked for missing values, outliers, and normality. Cases with missing values were deleted and data were scanned for univariate and multivariate outliers using z-scores and Mahalanobis’ D (Tabachnick & Fidell, 1996). Further, the values for skewness and kurtosis were examined and observed variables with the threshold value below ± 2.0 for skewness and ± 3.0 for

kurtosis were retained for further analyses (Bollen, 1989). All the observed values were within the acceptable limits of normality and hence no item was deleted.

Structural Equation Modeling

In order to examine the simultaneous effect of the independent variables on the dependent variables, their relationships were estimated by structural equation modeling (SEM) using AMOS graphics version 20.0. Parameters were estimated using the maximum likelihood method using a two-stage analysis (Anderson & Gerbing, 1988). The first stage was to validate the measurement model via confirmatory factor analysis (CFA) and the second stage was to test the proposed hypotheses via SEM. CFA validated the measurement model that contained twelve constructs (optimism, innovativeness, insecurity, discomfort, perceived usefulness, perceived ease of use, perceived enjoyment, perceived security, perceived trust, cognitive attitude, affective attitude, and intention to purchase via mobile device). Items with factor loadings less than 0.40 were deleted from the analysis.

Convergent validity was supported based on the following three criteria: (1) all loadings were significant ($p < .001$), (2) the construct reliability for each construct exceeded the recommended level of .60, and (3) the average variance extracted for each construct was above the cut-off criteria of .50 (Bagozzi & Yi, 1988). To test discriminant validity, a series of nested confirmatory factor models were run in which correlations between latent constructs were constrained to one (each of the off-diagonal elements of correlations was constrained and the model was re-estimated). Changes in chi-square were statistically significant in support of discriminant validity (Bagozzi & Yi, 1988).

Table 1: Sample scale items for constructs

Construct	Sample Scale Items
Optimism	<ul style="list-style-type: none"> • Technology gives people more control over their daily lives • Technology gives you more freedom of mobility • Technology makes you more efficient in your occupation
Innovativeness	<ul style="list-style-type: none"> • In general, you are among the first in your circle of friends to acquire new technology when it appears • You can usually figure out new high-tech products and services without help from others • You find you have fewer problems than other people in making technology work for you
Insecurity	<ul style="list-style-type: none"> • You do not consider it safe giving out a credit card number over a computer • You do not consider it safe to do any kind of financial business online • You worry that information you send over the Internet will be seen by other people
Discomfort	<ul style="list-style-type: none"> • Technical support lines are not helpful because they do not explain things in terms you understand • Sometimes, you think that technology systems are not designed for use by ordinary people • There is no such thing as a manual for a high-tech product or service that's written in plain language
Perceived Usefulness	<ul style="list-style-type: none"> • Mobile devices will be a useful mode of shopping • Using mobile devices will make the shopping process easier • By shopping through mobile devices my choices as a consumer will be improved (e.g., flexibility, speed)
Perceived Ease of Use	<ul style="list-style-type: none"> • I will be able to use a mobile device for shopping with some hints • I will be able to use a mobile device for shopping if I had used a similar system before • It will be easy to become skillful at using mobile device for shopping
Perceived Enjoyment	<ul style="list-style-type: none"> • The process of shopping through a mobile device will be enjoyable • While mobile shopping, I will experience pleasure • Overall, I believe that mobile shopping will be fun
Perceived Security	<ul style="list-style-type: none"> • The risk of an unauthorized third party seeing the payment process will be low in mobile shopping • The risk of abuse of billing information (e.g., address, names) will be low when using a mobile device for payment • I will feel secure in making a payment for a purchase through the mobile device
Perceived trust	<ul style="list-style-type: none"> • I will trust mobile device as a safe medium for shopping • I believe there is negligible risk that something may go wrong with using mobile device for purchase • I will be very cautious when shopping over the mobile device
Cognitive Attitude	<ul style="list-style-type: none"> • Mobile shopping would be a wise way to shop • Mobile shopping will be an effective way to shop
Affective Attitude	<ul style="list-style-type: none"> • Mobile shopping will make me feel happy • I would not like to use my mobile device for shopping
Intention to Purchase	<ul style="list-style-type: none"> • I intend to use mobile devices for purchase • I would like to purchase products and services through the mobile device

Following CFA, the structural model depicting the relationships among latent variables was estimated. The model consisted of four exogenous variables (optimism, innovativeness, insecurity, and discomfort), and eight endogenous variables (perceived usefulness, perceived ease of use, perceived enjoyment,

perceived security, perceived trust, cognitive attitude, affective attitude, and intention to purchase via mobile device). The fit indices of the structural model were within acceptable limits (Anderson & Gerbing, 1988). The results of the hypotheses testing are shown in Table 2.

Table 2. Standardized coefficients and fit statistics for the structural model

Hypothesis	Structural Paths	Standardized Estimate	Hypothesis Acceptance
H1	Optimism → Perceived Usefulness	0.482*	Accepted
H2	Optimism → Perceived Ease of Use	n.s.	Rejected
H3	Innovativeness → Perceived Usefulness	n.s.	Rejected
H4	Innovativeness → Perceived Ease of Use	0.265*	Accepted
H5	Innovativeness → Perceived Enjoyment	0.449*	Accepted
H6	Insecurity → Perceived Security	-0.443*	Accepted
H7	Insecurity → Perceived Trust	-0.441*	Accepted
H8	Discomfort → Perceived Usefulness	n.s.	Rejected
H9	Discomfort → Perceived Ease of Use	n.s.	Rejected
H10	Discomfort → Perceived Enjoyment	n.s.	Rejected
H11a	Perceived Usefulness → Cognitive Attitude	0.493*	Accepted
H11b	Perceived Ease of Use → Cognitive Attitude	n.s.	Rejected
H11c	Perceived Enjoyment → Cognitive Attitude	n.s.	Rejected
H11d	Perceived Security → Cognitive Attitude	0.253*	Accepted
H11e	Perceived Trust → Cognitive Attitude	0.358*	Accepted
H12a	Perceived Usefulness → Affective Attitude	n.s.	Rejected
H12b	Perceived Ease of Use → Affective Attitude	n.s.	Rejected
H12c	Perceived Enjoyment → Affective Attitude	0.257*	Accepted
H12d	Perceived Security → Affective Attitude	n.s.	Rejected
H12e	Perceived Trust → Affective Attitude	0.240*	Accepted
H13a	Cognitive Attitude → Intention to Purchase via mobile device	0.832*	Accepted
H13b	Affective Attitude → Intention to Purchase via mobile device	n.s.	Rejected

* Significant at $p < .001$; n.s. Non-Significant

Fit Statistics

• χ^2/df ratio/p-value	1.89 /.000
• Root Mean Square Error of Approximation (RMSEA)	.058
• Comparative Fit Index (CFI)	.927
• Normed Fit Index (NFI)	.934

RESULTS

Hypotheses 1 and 2 proposed a positive relationship between optimism and perceived usefulness and perceived ease of use, respectively. However, the results show that the relationship between optimism and perceived ease of use was not significant, thereby rejecting H2. Hypotheses 3, 4, and 5 positively related innovativeness to usefulness, ease of use, and enjoyment respectively. While H4 and H5 were found to be significant, the relationship between innovativeness and perceived usefulness was not significant, thereby rejecting H3. Hypotheses 6 and 7 stated a negative relationship of insecurity with perceived security and trust respectively. Both of these hypotheses were negative and significant, thereby accepting H6 and H7. Hypotheses 8, 9, and 10 stated a negative relationship between discomfort and usefulness, ease of use, and enjoyment. All three hypotheses were statistically insignificant, thereby rejecting H8, H9, and H10.

The relationship between perceptions toward mobile shopping and cognitive attitude were hypothesized by H11a, H11b, H11c, H11d, and H11e. Of these five hypotheses, usefulness, security, and trust were positively significant with cognitive attitude, thereby accepting H11a, H11d, and H11e. Perceptions toward mobile shopping and affective attitude were hypothesized by H12a, H12b, H12c, H12d, and H12e. The relationship between perceived enjoyment and trust were positively significant with affective attitude, thereby accepting H12c and H12e. Both cognitive and affective attitude were hypothesized to be positively related to intention to purchase via mobile phones, but cognitive attitude alone was significantly related to intention, thereby accepting H13a.

DISCUSSION AND IMPLICATIONS

The most significant takeaway from this study is that mobile shopping does not necessarily lead to

purchase through the mobile device. Retailers and marketers need to understand the factors that deter customers from completing the purchase cycle in spite of consumers using the mobile device for pre-purchase activities. The results of the study indicate that personality traits with respect to general technology use play a significant role in the perception toward mobile shopping. Optimism, innovativeness and insecurity have a direct impact on perceptions and an indirect impact on attitude and purchase intention. An interesting finding from the research is that consumer optimism and innovativeness play complementary roles in their influence on usefulness and ease of use. Individuals who are optimistic about technology in general find mobile shopping to be useful, but not necessarily easier to use. However, innovative individuals did not have a positive effect on usefulness of mobile shopping, even though they do find mobile shopping easier to use. Innovators are those who want to stay ahead of the curve with respect to technology. Though mobile shopping is gaining ground in terms of the number of users, it may not convey any real benefit to innovators.

In order for consumers to understand the ease of mobile shopping, marketers could convey the ease of use of mobile shopping via advertisements. Mobile marketers could place QR codes on promotions that make it easier for customers to go to the mobile site or the product page. Typing on a small screen may be a deterrent to some individuals that could be overcome by utilizing a predictive search feature on the mobile site. Amazon's mobile site is an example of a retailer successfully using the predictive search algorithm that makes it easier for consumers to search for what they need. Marketers also need to better convey the usefulness of mobile shopping to their customers. For example, Tesco in South Korea came up with a unique mobile shopping experience that let harried customers shop for groceries by creating a "virtual store" at train stations. Customers could use

their mobile phones to scan the barcode and purchase; the groceries were delivered to their door front at the end of the day. This is a means to differentiate the usefulness of mobile shopping compared to online shopping.

Individuals who are insecure about technology would be wary of the security features of mobile shopping and would have a lower trust level with the shopping process. Marketers need to address this issue by ensuring that the communication between the company and the mobile shoppers regarding the personal information sought is clear and transparent. Marketers need to ensure that it is obvious to mobile shoppers what they are agreeing to in terms of sharing of information. Further, strong encryption and a consistent design, look and feel across the retailer's online site and mobile site will play a role in enabling a seamless experience for customers. This familiarity with the site might lead customers to perceive a lesser risk if they already have had a positive experience with the retailer.

Perceived usefulness, security, and trust were found to have an impact on cognitive attitude while enjoyment and trust were found to have an impact on affective attitude. However, it is interesting to note that affective attitude does not play a role in purchase intention. It is cognition that leads to positive purchase intentions. It could be inferred from this result that enhancing cognition of the utility of mobile shopping is vital. More than the enjoyment aspect of mobile shopping that leads to affective attitude, it is critical for marketers to improve the perceptions of usefulness, ease of use, security and trust toward mobile shopping. Users have to be convinced of the utility of mobile shopping and must believe that their information is secure in order to complete the purchase through the mobile device.

A means to convert positive attitude toward mobile shopping into purchase could be accomplished through mobile applications specific to the retailer and

shopping apps provided by third-party developers. A well-designed and well-developed app has the capability to offer product and service suggestions that may be relevant to customers, thereby increasing the likelihood of purchase through the mobile device. Apps can also offer location-based deals and coupons, which are incentives to complete the purchase on the spot through the mobile device. Mobile apps that offer features such as letting customers access a retailers' inventory, allow price comparisons, offer personalized recommendations, and allow self-checkout could be a way to convert mobile shopping into purchase.

CONTRIBUTIONS, LIMITATIONS AND FUTURE RESEARCH

This study makes contributions to scholarship and practice in the new evolving area of mobile shopping. The results of this study provide a more comprehensive theoretical understanding of the drivers of adoption of mobile shopping by adopting an integrative approach that combines TAM and TRI to predict attitudes toward mobile shopping. Further, the results also offer useful knowledge to retail managers, brand marketers, system designers, and mobile application developers to help them develop innovative mobile shopping solutions.

The present study has some limitations. First, the study uses a student-sampling approach that limits the generalizability of the findings. Given that the current generation of college students grew up with technological devices, they are inherently comfortable with technology. That could be the reason for the insignificant relationship between general discomfort toward technology and mobile shopping perceptions. Second, the study does not measure the intention to purchase any particular product category through the mobile device. This is a limitation as we cannot generalize the results of this study across various product categories.

The study clearly points to exciting possibilities for future research in this area. Further research could compare international or cross-cultural mobile shopping trends and other consumer factors. More research needs to be undertaken to understand how and why affective attitude could lead to a positive behavior. Further, the research model proposed in this study could be adapted to different product categories to identify the differences in perceptions and attitude while shopping for various product categories that may require different levels of involvement.

CONCLUSION

Mobile technology's magical characteristics of an anywhere, anytime, easy to use personal device makes it one of the strongest channels for retail shopping. However, despite of all the inherent advantages of mobile shopping, adoption remains low. This study therefore is an early step in the direction of understanding the role of psychographic and behavioral factors that promote or inhibit customer intention to use mobile devices for shopping and purchase.

Mobile shopping is a marketing innovation that can touch the lives of billions of consumers across the world offering convenience, personalization, and instant connectivity. Mobile device usage is witnessing a paradigm shift from connectivity and simple applications to a medium for efficient consumption processes. With its immense potential to change the retailing landscape, retailers and marketers need to devote attention toward the motivations behind mobile shopping and purchase in order to emerge as winners.

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CHINESE CONSUMERS' PERCEPTIONS TOWARD SMARTPHONE AND MARKETING COMMUNICATION ON SMARTPHONE

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Abstract:

Qualitative research was conducted to explore Chinese consumers' perceptions of smartphones and marketing information on smartphones. Findings indicated that Chinese consumers' interpretations were largely shaped by their previous experiences with computer usage. The study also revealed the multiple barriers of mobile marketing on smartphones in the context of China. Theoretical and practical implications are offered.

Keywords: *smartphone, mobile marketing, m-commerce, China*

INTRODUCTION

In the morning on her way to work, Samantha logs on QQ (the most popular chatting software in China) on her smartphone to see if there are any messages left for her from her friends and colleagues. After that, she logs on Sina Weibo (the most popular microblog in China) to check a variety of information, repost some interesting ones, reply to messages, and make comments. If she still has time, she will go to ifeng.com to browse some news. During her work time, she sometimes uses her smartphone to check weather or news. On her way home, she usually repeats the activities that she does on her way to work. Before she goes to bed, she uses her smartphone to check Weibo and news again.

Samantha is one of the millions of smartphone users in China, and the scenario well demonstrates how a Chinese white-collar worker uses a smartphone in a typical workday. According to IPSOS Research (2011), as of 2011, there were almost 1 billion Chinese smartphone users, which suggests that about 35% of the Chinese urban population is using smartphones on a daily base. Those users are engaging in multiple activities on their smartphones, such as browsing websites, listening to music, sending and receiving emails, searching information through search engines, and taking pictures (IPSOS, 2011). The most recent report of Chinese Internet users released by the CNNIC (2012) revealed that the number of Chinese mobile Internet users has reached 356 million and more than half of them are smartphone Internet users.

With the high penetration and increasing popularity of smartphones in China, more and more marketers have started integrating smartphones into their marketing communication plan to better target the on-the-go population and supplement traditional media channels to maximize communication

effectiveness (Gao, 2011). For example, Ford China hired the Vpon advertising agency to design an HTML5 advertisement of the Ford Edge and place it on smartphones through LBS (location-based service) technology. The click rate of the advertisement was 2.5%. Similarly, McDonald's promoted its 76 Combo through smartphones and achieved an average click rate of 4% (Zhang, 2012).

While the industry has widely applied smartphone marketing in the Chinese market, the academic research lags far behind and the theoretical knowledge of smartphone marketing in the context of China is limited. Previous research on mobile marketing in the context of China is scarce and most of the studies focused either on Chinese consumers' general attitude toward mobile advertising (Tsang, Ho, & Liang, 2004; Xu, 2007) or their acceptance of mobile advertising (Peng, 2006; Young, 2011; Young, Liu, & Zhou, 2010a; Young, Liu, & Zhou 2010b; Zhao & Mao, 2008). Therefore, the purpose of this study is to fill the research gap by exploring Chinese consumers' perceptions toward smartphones and marketing information on smartphones.

LITERATURE REVIEW

Theoretical Framework: Media as a Source of Meaning

When interpreting the meanings of advertising, consumers use multiple frames of reference (Hirschman & Thompson, 1997; Jansson, 2002). In other words, the interpretative meanings of advertising emerge from "intertextuality" (Jansson, 2002), the internal co-existence and referentiality of various externally derived texts, genres, and discourses. These interpretative frameworks are essential to understand what advertising means to consumers and what they actually do with advertising.

The frames can be very wide ranging in scope and originate from consumers' personal experiences and socially derived knowledge (Mick & Buhl, 1992; McCracken, 1986; Hirschman & Thompson, 1997).

In the modern world, a large part of people's cultural frameworks is derived from media consumption (Janssan, 2002). As an important ideological force, mass media are consistently shaping these frameworks through sorting reality into meaningful categories (McCracken, 1987). Simultaneously, as sites of meaning (Janssan, 2002), different media signal different meanings to consumers and form various referential systems for consumers to interpret and construct meanings (Hirschman & Thompson, 1997). In the course of everyday life, various kinds of non-commercial media texts provide consumers with images of goods and services, images that consumers perceive and incorporate as meaningful components of their interpretations of commercial messages. At the same time, the technological characteristics of particular media platforms also establish different contexts that influence how consumers decode the meanings of advertising (Nelson, Keum, & Yaros 2004). In summary, consumers' relationships to the mass media platforms themselves constitute an essential aspect of the perceived meanings they derive from the advertising transmitted via these media.

Chinese Consumers' Attitude Toward and Acceptance of Mobile Marketing

In the English literature, previous research on mobile marketing in the context of China is relatively scarce. Within the limited studies, most of them focus either on Chinese consumers' general attitude toward mobile advertising (Tsang, Ho, & Liang 2004; Xu, 2007) or factors that affect their acceptance of mobile advertising (Peng, 2006; Young, 2011; Young, Liu, & Zhou, 2010a; Young, Liu, & Zhou 2010b; Zhao & Mao, 2008).

For Chinese consumers' attitude toward advertising, previous research revealed that Chinese consumers tend to have a negative attitude toward mobile advertising (Tsang et al., 2004; Xu, 2007), but incline to accept permission-based mobile advertising (Tsang et al., 2004). Entertainment and credibility were found to be the most important attributes to influence consumer attitudes toward mobile advertising (Tsang et al., 2004; Xu, 2007). In addition, personalization (Xu, 2007) and incentive (Tsang et al., 2004) were also found to affect Chinese consumers' acceptance of this particular type of marketing communication. Furthermore, contradicting results were uncovered regarding the component of irritation on consumer attitudes toward mobile advertising.

While Tsang et al. (2004) revealed that irritation affect consumer attitudes toward mobile advertising, Xu (2007) found that information and irritation have no effect on consumer attitudes toward mobile advertising. Finally, gender differences were found with regard to consumer attitude toward mobile advertising (Xu, 2007). Specifically, personalization is particularly favored by females and entertainment is emphasized by males.

For the factors that influence Chinese consumers' acceptance of mobile advertising, previous research identified a variety of personal, social, and cultural variables. For example, Zhang and Mao (2008) found that perceived usefulness, perceived ease to use, trust, and subjective norms positively predicted young Chinese consumers' intention to use SMS (text-based) advertising. Similarly, Young, Liu, and Zhou (2010) revealed that perceived utility of mobile advertisements, including contextual advertising, control or personalization, perceived risks or sacrifice, consumer trust of operators and marketers, ease of use, and subjective norms, are the most important predictors of Chinese consumers' acceptance of mobile advertising. Young et al. (2010) also compared Chinese consumers to American consumers and found that young consumers tend to exhibit very similar perceptions. Focusing on mobile marketing, Peng (2006) found that different variables, such as product profiles, personalization, consumers' previous experience, and consumer pattern and privacy all affect consumer purchase and opt-in intention. In order to clarify the effect of cultural dimensions on consumers' use of mobile SMS advertising, Young (2011) conducted a study in Taiwan and found that consumers' uncertainty avoidance index negatively influences their use of mobile advertising, while consumers' individualism index positively influences their use of mobile advertising.

In summary, the number of previous research studies on mobile advertising in the context of China is limited. Although those studies revealed significant findings regarding Chinese consumers' general attitude toward mobile advertising and their acceptance of mobile advertising, all the studies were conducted in the context of previous generations of mobile phones. However, as previously discussed, a medium is not only a technological and passive platform for presenting commercial information. Each medium platform may generate its own sets of meanings through which consumers react to and interpret the content that it transmits (Gould & Gupta, 2006; Hirschman & Thompson, 1997). Therefore, it would be interesting to explore Chinese consumers' perceptions of mobile marketing in the context of

smartphones to see the similarities and differences. In addition, the dominant research orientation of all studies has been quantitative, with a positivistic paradigm. While those studies generated valuable results, some researchers (Maity, 2010; Wagner, 2011) have suggested that more qualitative research with an emphasis on description and understanding from the perspective of users are needed to provide a more complete picture of mobile marketing. Thus, the current study adopted a qualitative research method to explore Chinese consumers' perceptions of mobile marketing to better catch the richness and dynamics of the phenomenon. Specifically, the study explores Chinese consumers' usage and experiences of smartphones and how they perceive, understand, and interpret marketing information on their smartphones in their everyday lives.

RQ1: What are socially constructed meanings of smartphones among Chinese consumers?

RQ2: What are socially constructed meanings of marketing information on smartphones among Chinese consumers?

METHODOLOGY

The target population of the study is Chinese, urban, white-collar workers who are currently using a smartphone. Research indicated that Chinese, urban, white-collar workers are the major users of smartphone (IPSOS, 2011). The theoretical perspective

guiding the study is phenomenology. Phenomenology is the study of human experience and the structures of consciousness as experienced from the first-person point of view (Sokolowski, 2000). Hence, the in-depth interview is the most commonly used method in phenomenological investigation (Moustakas, 1994; Thompson, Locander, & Pollio, 1989). It is a powerful qualitative method of phenomenological investigation because it “gives us the opportunity to step into the mind of another person, to see and experience the world as they do themselves” (McCracken, 1988, p. 9). It only sets broad parameters for the discussion, leaving participants free to tell their own stories. From a phenomenological view, human beings gain access to realities through their consciousness. A loosely structured, discursive conversation is a good way to access participants' conscious experiences and allow their realities to emerge.

All interviews were conducted by using online chatting software such as QQ and MSN. With the development of technology and change of consumers' behavior, online interviews are more and more popular and deemed as a feasible way to collect data in academia and industry (Salmons, 2010). For participants' convenience, most of the interviews were conducted either during lunch breaks (12:00 pm – 2:00 pm) or in the evenings (6: 00 pm – 10: 00 pm). Each interview lasted about one hour.

Table 1: Profile of participants

Name	Gender	Age	Occupation	Location	Smartphone Brand	Smartphone Experience
1. Fancy	Female	29	Instructor	Shanghai	Motorola	1 year
2. Leo	Male	28	Manager	Shanghai	ZTE/HTC	5 years
3. David	Male	36	Investor	Shanghai	iPhone	Unknown
4. Lyn	Male	24	Salesperson	Shanghai	iPhone	4 years
5. Ron	Male	36	Engineer	Qingdao	HTC/Cool Pad	Unknown
6. Samantha	Female	26	Customer Service	Qingdao	Nokia	1 year
7. Kara	Female	30	Sectary	Chongqing	Motorola	3 years
8. Mindy	Female	27	Consultant	Nanjing	Nokia	1 year
9. Jenny	Female	31	Sectary	Beijing	Huawei	Unknown
10. Henry	Male	35	Technician	Beijing	ZIE	2 years
11. Frank	Male	27	Customer Service	Beijing	Xiaomi	Unknown
12. Isasa	Female	33	Data Collector	Beijing	iPhone	2 years
13. Shannon	Female	26	Consultant	Beijing	Samsung/	1 year
14. Catharine	Female	24	Planner	Guangzhou	iPhone	3 years
15. John	Male	26	Salesperson	Guangzhou	LG	Unknown
16. Michele	Female	24	Strategist	Guangzhou	Motorola	Unknown
17. Rena	Female	34	Sectary	Wuhan	Nokia	Unknown
18. Charlie	Male	35	Manager	Wuhan	iPhone	Unknown
19. Steve	Male	33	Financial assistant	Shenzhen	iPhone	Unknown
20. Henry	Male	35	Human resource	Shenzhen	iPhone	5 years

Purposive sampling and snowball sampling guided recruitment of participants. The criterion for sufficient sampling is saturation, that is, the point at which no new concepts and themes emerge (Corbin & Strauss, 2008). In total, 20 white-collar professionals from Beijing, Shanghai, Guangzhou, Chongqing, Wuhan, Nanjing, and Qingdao participated in this research. Among these participants, 10 were men and 10 were women, whose ages ranged from 24 to 35 years. All participants had some college-level education and engaged in a variety of occupations. All participants used a smartphone and had one to five years experience of smartphone usage (see Table 1).

Data analysis followed the principle of phenomenological reduction (Moustakas, 1994). The first step of phenomenological reduction is horizontalization, which means putting the immediate phenomena on a level plane without assuming an initial hierarchy of “reality” (Ihde, 1986). The second step of phenomenological reduction is to delimit the invariant horizons or meaning units. In this stage, the primary job of the researcher was to identify and compare repeated or similar words, phrases, and sentences appearing in each transcript. Generally, 20 to 30 meaning units were generated in every transcript. The next step that the researcher undertook was to cluster the invariant constituents into themes. During this phase, the researcher focused on the internal relationships and structures of the meaning units and grouped them into appropriate themes.

Different research paradigms demand different evaluative criteria. Generally, “credibility,” “transferability,” “dependability,” and “conformability” are the most important evaluative criteria for qualitative research (Hirschman, 1986; Miles & Huberman, 1984; Lincoln & Guba, 1985). Credibility means that the reconstruction of multiple realities are credible to the constructors of the original multiple realities. In other words, credibility means authentic representations of participant’s social experiences. Transferability means that study findings fit within contexts outside the study situation. In other words, transferability is achieved when the findings have applicability to another setting, to theory, to practice, or to future research. Dependability refers to the minimization of idiosyncrasies in interpretation. It suggests that multiple human investigators should draw similar interpretations regarding a specific phenomenon. Conformability refers to the extent to which biases, motivations, interests, or perspectives of the inquirer influence interpretation. However, the interpretation generated by the researcher is not assumed to be disinterested or value free, but is

expected to be supportable from the data as gathered by the inquirer and to represent a logical set of conclusions given the reasoning he or she employed during the interaction.

Several steps were taken to ensure the quality of research. First, both Chinese and English versions of the data analysis reports were provided to some participants to ensure that the findings represented their perspectives and understanding. Second, during the entire study, the researcher constantly reflected on her own assumptions, beliefs, and biases, especially in comparison with participants’ realities, to confirm that the interpretations reflected the participants’ views, rather than the researcher’s views. Third, peer debriefing and external auditors (Creswell & Miller, 2000) also ensured the quality of the analysis. Finally, this researcher observed that one of the most important criteria for evaluating the quality of a phenomenological study is to make sure that each theme is evidenced by the words of the participants themselves (Graves, 2006).

FINDINGS

Consumers’ Interpretations of Smartphone

Anywhere/Anytime: Cellphone + Computer

According to the participants, the smartphone is a “mini-sized computer” or the “combination of cellphone and computer,” which enables them to connect and communicate with friends, seek and share information, download software, play games, and work from anywhere at any time. Specifically, the participants are engaging multiple activities on their smartphone, including some traditional mobile phone functions of making phone calls, texts messaging, listening to music, and taking photos, as well as some “smart” functions such as QQ chatting, micro-blogging, video recording, reading books, and purchasing and selling stocks.

Information? Entertainment? Or Infortainment?

In the life-world of the participants, the smartphone is deemed as an “infortainment” medium which satisfies their needs of information and entertainment simultaneously. While some participants consider the smartphone as the major channel to gain information, especially breaking news, because of their “information anxiety symptom,” some participants treat their smartphones as their entertainment center to “kill time.” However, the majority of the participants tend to think their smartphones perform both the functions of information and entertainment.

Independent Versus Dependent

Participants of the study displayed different degrees of dependence on their smartphones. When

asking the participants about their feelings if one day their smartphones were gone, the researcher received a wide range of answers such as “It’s totally okay,” “I may feel uncomfortable,” “I might not get used to it,” and “I cannot live without it.” Comparatively, when the participants face the hypothetical scenario of traditional cellphone deprivation, all of them showed high dependence on this type communication tool. In other words, while the traditional mobile phone is deeply intertwined into the participants’ everyday lives as a necessity, the smartphone to a large degree is still considered as an addition.

Apps: Free is the Key

All the participants in the study had experiences downloading apps and software on their smartphones. There are a variety of apps and software that the participants are using on their smartphones, including chatting software, microblogging apps, GPS apps, picture editing software, reading software, and game apps. With a few exceptions, the majority of participants mentioned that they had only downloaded free software and apps and would continue to download those software and apps with no charges.

In summary, in the life-world of participants, the smartphone means the hybrid of cellphone and computer, which fulfills Chinese consumers’ multiple personal and social needs, such as communication, social interaction, information, and entertainment. Apps were perceived as the most unique characteristic of the smartphone that differentiates it from the traditional mobile phone. However, in the context of China, only a “free meal” will be accepted by consumers. Chinese consumers’ interpretations of smartphones offer a unique context and referential framework for them to interpret the marketing information on this particular media platform.

Consumers’ Interpretations of Marketing Information on Smartphones

Impression Versus Attitude

In general, all the participants indicated that they have seen some advertising or marketing information on their smartphones because “advertising is unavoidable in the modern society.” However, only a few of them remembered the specific messages or brands that appeared on their phones. When the participants encountered commercial information on their smartphones, they usually “ignore it,” “never check it carefully,” or “delete it directly.” For SMS advertising, they generally use software to block the messages or delete the messages without reading them because this type of message is “useless,” “not secure,” “wastes data,” and “may cause the computer to be dead.” So basically, the participants have some

impression on marketing information on their smartphones but have a negative attitude toward this type of marketing communication. For other types of advertising, such as apps, mobile advergames, and product placement, the participants displayed a more positive attitude and were more inclined to accept them.

M-Commerce: A Long Way to Go

Among all the participants, only a few of them had tried purchasing products through their smartphones. Most participants preferred to use a computer to do online shopping. For those who had tried m-commerce, they also mentioned that the reason that they purchased the products through their smartphone was because the computer was not available at the time. In other words, compared to e-commerce, m-commerce is still in the incubation stage in China. It may take awhile to cultivate Chinese consumers’ habits of shopping on their smartphones.

Barriers of Marketing on the Smartphone

According to the participants, there are different kinds of barriers of marketing on the smartphone for Chinese consumers. For advertising, the major concerns are security, usefulness, and data limit. Being bombarded by advertising in their everyday lives, Chinese consumers are not surprised to see commercial information on their smartphones. However, because the smartphone is perceived as a personal gadget, they do not want to get advertising messages from unknown source, which makes them feel non-personal and bring the concerns of possible viruses that may impact their smartphones. In addition, the participants mentioned that most of the time the received advertising messages seem irrelevant to them. Therefore, they see no value to check the messages. Finally, in the United States the cellular service companies provide data plans for smartphone users. In China, the service companies charge consumers based on how much data they use every month. Therefore, they do not want to waste their data fee to check commercial information.

For m-commerce, the major barriers are the small size of the screen, slow speed, insecure transaction, and inconvenience. When discussing the factors that limit their purchases through smartphones, the participants listed several reasons. The first one mentioned was the relatively small size of the screen. Most participants mentioned that compared to the computer, the smartphone has a small size of screen. Therefore, it is hard for them to get all the detailed information of the product and compare different products at the same time, which to a large degree confines their online shopping experiences. The second reason is the slow speed of the Internet.

Compared to the computer, the speed of using a smartphone to surf the Internet is relatively slow, which means it may take a long time to open a webpage, to display a picture, and to process the transaction. Thus, the participants are reluctant to use their smartphones to do online shopping unless their computers are not available. The third barrier is security issues. Many participants stated that the transaction software is not secure. Therefore, they are hesitant to use a smartphone to purchase products. Finally, because of these three reasons, the participants felt that it is not convenient to use smartphone to purchase products or use services.

Ways to Success: Need + Benefit

According to the participants, for them to better accept advertising on smartphones, the advertising message must satisfy their needs. In other words, the commercial information should be relevant to them. The development of LBS technology brings the possibility for marketers to better satisfy consumers' need. For example, if a consumer receives a coupon when he/she is close to a restaurant, he/she may be more likely to eat in the restaurant. For SMS advertising, source credibility is the key. The participants mentioned that if the advertising message is sent by prestigious companies or familiar people, they are more likely to read the message. For other types of advertising, added value or consumer benefit is the possible motivator for Chinese consumers to accept commercial information. For example, some participants indicated that if the service company reduces their monthly fee, they do not mind reading or listening to advertising messages.

For Chinese consumers to better accept e-commerce, the most important thing is to cultivate their consumption habits. Data revealed that participants in the study are highly accustomed to online shopping through computers. However, it took about 10 years for online shopping to be fully adopted by Chinese consumers after it was initiated at the beginning of the 21st century. Therefore, it may take awhile for Chinese consumers to get used to m-commerce. For technological issues, Chinese consumers' adoption of e-commerce may depend on a larger size of smartphone screen, faster speed of Internet connection, and secured and simplified transaction process.

DISCUSSION

In a phenomenological study, a major purpose is to produce clear and accurate descriptions of a particular aspect of human experience (Polkinghorne, 1989). In the current study, the central phenomenon under consideration was Chinese consumers'

experiences using the smartphone and their interpretation of marketing information on the smartphone. For a phenomenological investigation, one critical goal is to establish the knowledge of essences by the intuitive integration of fundamental textual and structural descriptions into a unified description of the phenomenon as a whole (Moustakas, 1994). Further analysis revealed that the overarching theme that unified the descriptions and reflected the essence of the particular phenomenon is the "constant comparison of computer experiences."

When describing their smartphone experiences and interpreting marketing information on their phones, the participants' previous experiences of computer usage emerged as the most important referential dimension for them to compare and contrast. In the life-world of the participants, the smartphone means a computerized cellphone, an infortainment mini-computer, an addition to their everyday lives, and a media platform to enjoy free software. Similar to their unfavorable evaluation of email marketing, the participants displayed a relatively negative attitude toward SMS advertising message. In the meanwhile, they tend to have a rather positive attitude toward some new forms of advertising such as apps, product placements, and advergames. Similarly, for them to adopt m-commerce, their experiences should be equivalent or similar to their online shopping experiences through computers. The current study has both theoretical and managerial implications.

In summary, several important conclusions can be drawn from the current study: First, Chinese consumers have impressions on marketing information in the context of smartphones. Second, Chinese consumers display a general negative attitude toward mobile marketing in the context of smartphones. Specifically, Chinese consumers have a more negative attitude toward SMS advertising, while showing a more positive attitude toward new forms of advertising such as apps, product placements, and mobile advergames. Finally, Chinese consumers' previous experiences of online shopping through computers influence their adoption of m-commerce in the context of smartphones. Specifically, the perceived size of the smartphone screen, the perceived speed of Internet connection, the perceived security of transaction, and the perceived ease to use are the key factors to influence their adoption.

Theoretical Implications

First, consistent with previous research (Tsang, Ho, & Liang 2004; Xu, 2007), participants in the current study displayed a relatively negative attitude toward mobile advertising in the context of smartphones.

However, as revealed in the study, their negative evaluation on mobile advertising was originated and migrated from their unfavorable attitude toward online advertising that they encountered when using computers. For the new types of advertising such as apps including mobile advergaming, the participants showed a relatively high receptivity.

Second, the study also confirmed several factors uncovered by previous studies that influence Chinese consumers' acceptance of mobile marketing in the traditional mobile phone platform (Peng, 2006; Young, Liu, & Zhou, 2010a; Young, Liu, & Zhou 2010b; Zhao & Mao, 2008), such as perceived usefulness, perceived ease to use, trust, and subjective norms.

Finally, another important theoretical contribution of the study is to reveal the multiple barriers of mobile marketing on smartphones among Chinese consumers. Findings of the study suggest that consumers constantly compare their smartphone experiences with their computer usage experiences, and all the barriers of mobile marketing on smartphones come from the comparison.

Managerial Implications

The study offers several managerial implications for marketers to better target Chinese consumers in the context of smartphones. First, for traditional SMS advertising, marketers should increase the source credibility. Specifically, the company may consider using a word-of-mouth strategy by asking consumers' acquaintances to send messages or use permission-based marketing.

Second, since Chinese consumers are less critical toward new forms of mobile advertising, marketers should design apps and mobile advergaming to better connect with Chinese consumers.

Finally, to better motivate Chinese consumers to engage in m-commerce, marketers may emphasize the similarities of transactions between e-commerce and m-commerce, especially in terms of the large size of smartphone screens, fast speed of Internet connection, and secured and simplified transaction process.

LIMITATION AND FUTURE RESEARCH

Several limitations should be noted. This research is a snapshot in time of a dynamic phenomenon. Longitudinal data could provide additional insights into the interpersonal dynamics and micro-cultural characteristics of users' life-worlds regarding this particular phenomenon (Muniz & Schau, 2007).

This study focused on urban, white-collar smartphone users. Although the findings reflect contextualized understandings of smartphone experiences and marketing information on smartphone in the context of China, the complexity

and dynamics of this subculture means that the collected data cannot reveal whether the similar meanings will emerge for this group. For example, in this study, all the participants come from first- and second- tier cities. Smartphone users from small cities may have different interpretations.

Furthermore, as the smartphone has gained popularity and penetrated different socioeconomic layers, the user structure is becoming more diverse. Studies designed to explore the dynamics and variations among subcultures and subgroups of smartphone users should enrich our understanding of this particular phenomenon. For example, college student smartphone users may create different meanings for this particular medium.

To broaden the research context into a cross-cultural environment, future research may compare similarities and differences regarding this specific phenomenon in different countries and cultural areas.

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THE EFFECTS OF INTERFACE DESIGN OF HAND-HELD DEVICES ON MOBILE ADVERTISING EFFECTIVENESS AMONG COLLEGE STUDENTS IN CHINA

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Abstract:

Mobile advertising has gained great popularity in China over the past decade. However, there is still a lack of understanding of what factors may influence mobile advertising effectiveness in China. This study employs mobile marketing theories and examines how the interface design of hand-held devices influences mobile advertising effectiveness among college students in China. A survey with 442 undergraduate and graduate students was conducted in Beijing in 2011. Results indicate that the interface design of the hand-held devices, especially the ubiquitous feature, large screen size, advertisement size, and ease of use, will foster a positive emotion, increase Chinese college students' arousal upon receiving mobile ads, and increase purchase intention. Theoretical and practical implications and suggestions for future research are discussed.

Keywords: mobile advertising, China, interface design, hand-held, human-computer interaction, ubiquity, emotion

INTRODUCTION

With the advances and diffusion of mobile technologies, mobile advertising is attracting more and more attention from industries and academic scholars (Wais & Clemons, 2008). A survey conducted by a global mobile marketing association showed that there are now more mobile phone subscribers in the world than wired phone subscribers. At the end of 2011, there were 6 billion mobile subscriptions worldwide, equivalent to 87% of the world population (The International Telecommunication Union, 2011). Global statistics shows that 669.5 million people used mobile email in 2011, with an expected growth to 2.4 billion by 2016 (Portia Research, 2012). Many forecasters, basing their predictions on the increasing prevalence of standard mobile Internet phones, suggest that in the near future most Internet access will take place by means of small wireless devices, equipped with a browser and a wireless connection, that provide "anytime and anywhere" access.

The rising popularity of mobile Internet and Short Message Services (SMS) has resulted in the increasing

use of hand-held devices to deliver advertisements. In 2006, among the 350 billion text messages exchanged worldwide every month, 15% were classified as commercial or marketing messages (Mack, 2007 (MMAGlobal, 2006). According to Gartner (2012), global expenditure on mobile advertising will double from \$3.3 billion in 2011 to \$20.6 billion in 2015, while brand spending on mobile advertising will grow from 0.5% of the advertising budget in 2010 to more than 4% in 2015. Meanwhile, the wireless technology allows effective targeting and tailoring of messages to customers (Barnes & Scornavacca, 2004). Studies indicate that the response rate for mobile advertising campaigns can be as high as 40%, while direct mail generally has a 3% response rate and Internet banner ads only generate a 1% response rate (Jelassi & Enders, 2004). Mobile advertising, according to many marketing research companies, has made up the largest share of mobile commerce revenues (Xu, Liao, & Li, 2008).

China has the highest growth rate in hand-held devices as well as SMS penetration and boasts the

world's largest number of mobile phone subscribers (Xu, 2006; MIIT, 2010). By December 2012, the number of mobile phone users in Mainland China hit a new milestone of 1.104 billion and mobile communications revenue totaled \$116.26 billion over the first eleven months of 2012 (Shu, 2012). In terms of the SMS market, the total volume of text messages in Mainland China reached 736.1 billion in 2011, up from 502.7 billion four years ago (Li, 2012). Yet, it is still unclear to what extent Chinese consumers accept mobile advertising and what factors may influence their acceptance (Du, 2012; Merisavo, Kajalo, Karjaluoto, Virtanen, Salmenkivi, Raulas, & Leppaniemi, 2007).

With the small screen and lightweight, hand-held devices can be carried anytime and anywhere, suggesting peoples' experience of viewing ads on hand-held devices may be different from reading and viewing ads on newspaper, television, or home computers. Research of the antecedents influencing the adoption of mobile advertising has been abundant (Choi, Hwang, & McMillan, 2008; Du, 2012; Tsang, Ho, & Liang, 2004; Xu, 2006; Xu, Liao, & Li, 2008; Yang, Zhou, & Liu, 2010). However, few empirical studies have tested how the interface design of hand-held devices influences the effectiveness of mobile advertising, especially in countries and cultures outside of the United States (Vatanparast & Butt, 2010). User experience, defined as "a person's perceptions and responses that results from the use or anticipated use of a product, system, or service" (ISO, 2009) has become a central issue for mobile advertising due to the special mobile setting and the mobile device constraints (Lee & Benbasat, 2003; Shneiderman, 2003). While consumers can enjoy instant Internet access and enrich their shopping experience on their mobile devices, constraints such as small screen size, limited processing power, low bandwidth, and awkward input/output interfaces may be potential inhibitors of mobile advertising (Lee &

Benbasat, 2003). Interface design of mobile devices thus calls for advertising researchers' and marketing practitioners' attention to provide consumers with a complete and immersive mobile commerce (m-commerce) experience (Adhami, 2012).

One possible effect of the design of the mobile interface is the emotional response to mobile ads. Xie and Newhagen (2012) found that as the proximity between the user and the interface diminishes, the ubiquity and mobility of hand-held devices can generate user emotions such that mobile users reported higher levels of anxiety compared with those receiving the same stimuli on a desktop and laptop. Although it has been well believed that mobile advertising influences customers' behavioral intentions (Choi, Hwang, & McMillan, 2008; Tsang, Ho, & Liang, 2004; Xu, 2006), the understanding of customers' emotional response to mobile advertising is still weak. A major stream of marketing studies postulate that advertising can induce emotional responses in consumers and impact their behavioral intentions (Lazarus, 1984; Stout & Leckenby, 1986; Ellsworth, 2003). It is therefore critical to assess how the interface design of mobile devices impacts customers' emotional response to mobile advertisements, which may in turn influence purchase intention and maximize mobile advertising effectiveness. Thus, this study intends to extend the discussion of mobile advertising effectiveness and test the impact of mobile devices' interface design on consumers' emotional response to mobile advertising in China.

LITERATURE REVIEW

Mobile Advertising

Recent developments in wireless technologies have turned hand-held devices into a promising advertising media as marketing practitioners realized that compared with other media channels, mobile devices have numerous advantages including ubiquity,

timeliness, interactivity and personalization (Sharma, 2008; Spurgeon, 2005; Yang, Zhou, & Liu, 2012). As the screens of mobile phones become larger, industry proponents have labeled mobile devices as the third screen that can generate revenue from selling news content and advertising (Cauley, 2005; Ma, Suntornpithug, & Karaatli, 2009; Yang, 2007). The Wireless Advertising Association defined mobile marketing as sending personalized advertising messages about products or services to mobile devices such as mobile phones or PDAs (Tsang, Ho, & Liang, 2004). Examples of mobile advertising methods include text messages via SMS, mobile banners, and mobile video advertisements.

Integrating mobile advertising into other campaigns rather than treating it as a stand-alone platform can highly improve the campaign effects for traditional advertisers (Laszio, 2009). According to comScore M: Metrics (2007), nine million people reported responding to an advertisement in a traditional medium by sending a text message, and more than one million responded or purchased based on that interaction. As a device that customers are likely to always carry with them, the hand-held device has a unique ability to knit together advertising messages delivered via other media. Marketing research companies suggested that besides SMS and mobile Internet banner ads, other options such as game and applications downloads, mobile coupons, mobile wallpaper images, and mobile phone ringtones can also facilitate customer interaction with advertising (Laszio, 2009).

Until now, most previous studies about mobile advertising effectiveness focused on SMS ads; those models have been tested in the United States and Asian countries (Choi, Hwang, & McMillan, 2008; Tsang, Ho, & Liang, 2004; Xu, 2006; Xu, Liao, & Li, 2008; Yang, 2007). However, it is still unclear about people's perceptions of other formats of mobile advertising. Since the hand-held device has become an emerging

and effective advertising medium, there is a strong need for researchers to understand the preference and effectiveness of other formats of mobile advertising other than SMS messages.

Interface Design of Hand-held Devices

Screen Size

There has been abundant research about the effects of screen size on emotion and cognition. Scholars found that across a variety of content (talk shows, PSAs, comedy, and segments from movies), viewers reported that they like and enjoy large screens more than small ones (Lombard, 1995; Reeves, Lang, Kim, & Tatar, 1999). Meanwhile, viewers rate the action on large screens as more intense and the movement portrayed on large screens as more exciting (Lombard, Reich, Grabe, Campanella, & Ditton, 1995). Studies also have found that larger screens would increase people's attention (Detenber & Reeves, 1996), improve memory (Kim & Biocca, 1997), and lead to higher levels of arousal (Lombard et al., 1995).

These studies provide solid evidence to understand the effects of large screens, but they did not make advertising a focal point. Until now, we have known little about viewers' feelings about viewing advertising on large screens (Moriarty, Mitchell, & Wells, 2009). McNiven, Krugman, and Tinkham (2012) found that large-screen TV can increase people's attention to commercials, enhance recognition and recall of advertising information, and reduce skepticism of advertising. Codispoti and De Cesare's (2007) study revealed a magnifying effect of a large screen on valence and arousal such that positive images were perceived as more positive and negative images were perceived as more negative. Bellman, Schweda, and Varan (2009) found an interaction between screen type, viewing angle, and program duration on attitude toward the ads.

However, screens used in those experiments were usually in the range of 15 to 40 inches in diagonal, and they were viewed from approximately 5 to 7 feet. In a

few exceptions, screens are slightly smaller and viewed on a desktop computer (Reeves, Lang, Kim, & Tatar, 1999). To our knowledge, little research has examined the impact of the small screen of hand-held devices such as an iPod or a mobile phone on people's emotional and cognitive responses to the advertising stimuli (Bellman, Schweda, & Varan, 2009).

The small screen size has been considered as a constraint of hand-held devices (Lee & Benbasat, 2003). To be portable, mobile devices must have smaller screens, less convenient input facilities, and lower multimedia processing capabilities (Lee & Benbasat, 2004), which makes the interface less friendly (Shneiderman, 2003). Thus user experience with mobile ads may be different than that with the stationary personal computer. For example, content formatted for the hand-held screen has been found to be harder to draw viewers' attention than a full web page (Laszio, 2009). This study will examine users' emotional experience when viewing ads on the screen of small mobile devices.

Ubiquity and Mobility

Ubiquity and mobility are considered as the defining features of portable hand-held devices (Faiola & Matei, 2010). The concept of "ubiquitous computing" has been widely discussed in the human-computer interaction field to explain the nature of ubiquity (Weiser, 1991, 1993; Weiser & Brown, 1996). The original meaning of ubiquitous computing is that the ubiquitous computational artifacts have been woven into our everyday lives so that we are not only using or interacting with information technology, but living with it (Hallnäs & Redström, 2002; Satyanarayanan, 2001). Thus, computers are not only the tools we use, but also devices that are integrated with our physical environment wherever we live (Hallnäs & Redström, 2002).

Compared with the stationary desktop and laptop computers, hand-held devices are more portable and ubiquitous because of their unique strengths in small

size, light weight, long battery life, bandwidth and Internet connectivity anytime and anywhere (Kakihara & Sørensen 2002; Xie & Newhagen, 2012; Zheng & Yuan, 2007). The mobility of hand-held devices can be understood from three aspects: spatiality, temporality, and contextuality (Kakihara & Sørensen, 2002; Ishii, 2006). Spatially, due to mobility, portability and the long life of the battery, hand-held devices can be carried wherever the user goes. The wireless nature of hand-held devices allows users' location-free access to a wide variety of products through broadband wireless networks. Temporally, mobile users have the ability to access the Internet instantly at any time, even when engaged in another task such as walking and driving. Contextually, the interaction between the user and the hand-held device has been regarded as a dynamic process, meaning mobile advertising can provide personalized information based on a user's physical location and personal interest (Lee & Benbasat, 2004; Xu, 2006; Xu, Liao, & Li 2008). Rao and Minakakis (2003) argue that nowadays it is urgently necessary to develop new marketing strategies based on a customer's real-time needs. The researchers think that mobile technology can be a useful tool because of its location-recognition capability. Yan, Wang, and Wei (2004) found that personalized mobile advertising can aim at certain customers and satisfy their needs based on their shopping locations and histories. Xu (2006) also found personalization based on the mobility of mobile devices plays an important role in influencing people's perception and attitude toward mobile advertising in China.

Ease of Use and Interface Complexity

Perceived ease of use has been a central component of the technology acceptance model (Davis, 1989; Davis, Bagozzi, & Warshaw, 1989). Defined as the "degree to which a person believes that using a particular system would be free of effort" (Davis, 1989, p. 320), perceived ease of use is a significant predictor of innovation diffusion and

acceptance of new technologies (Hanley & Becker, 2008; Sun, Tai, & Tsai, 2010). Seyal and Pijpers's (2004) study of senior government officials in Brunei suggested that perceived ease of use was the only factor contributing to Internet usage.

In the mobile environment, Medhi, Patnaik, Brunskill, Gautama, Thies, and Toyama's (2011) study with low-literacy mobile device users showed that although mobile devices lend people a rich user interface design space, usability still remains a hurdle for that group of users. Academic and industry marketing research also indicates that ease and convenience of use is a prerequisite of consumers' acceptance of mobile commerce (Adhami, 2012) and mobile entertainment (Leong, Ooi, Chong, & Lin, 2011). Consumers need interfaces that are simple and easy to navigate (Adhami, 2012). The reason is that complex interface design with a deep hierarchy will increase cognitive burden on users by forcing more choices (Rodden, Chervest, Davies, & Dix, 1998). Shneiderman (2003) noted that as the attention has shifted from AI (artificial intelligence) to UI (user interface), it is necessary to develop devices that enable users to satisfy their needs. Those previous studies mainly focused on either elderly people (Dogruel, Joeckel, & Bowman, 2011) or novice mobile users (Brunskill, Gautama, Thies, & Toyama, 2011). This study explores how ease of use and interface complexity predicts mobile advertising effectiveness among young college students who are more technology savvy.

Ad Size

Prior research has documented how advertisement size affects attention to (Hendon, 1973), and recall and recognition of advertisements (Homer, 1995). For example, Silk and Geiger (1975) detected a relationship between advertisement size and selective exposure for newspaper ads such that brand user associations get stronger as ad size increases. In studying Yellow Page advertisements, Lohse (1997) used eye movement cameras and suggested both the

size and the position of the Yellow Page ads have a significant influence on reading rates. Later, Abernethy and Laband (2004) found that larger advertisements in the Yellow Book can generate more calls than smaller ones.

The impact of ad size is also widely examined for online advertising. Li and Bukovac (1999) found that larger advertisements are better comprehended than smaller ones, but do not generate more click-through rates. Research using Eyetrack III (Outing, 2004) tested a variety of ad placements and formats on different webpages and found that bigger ads had a better chance of being seen. On article pages, ads that occupied one-half page were most intensely viewed. Similarly, Rosenkrans (2010) concluded that banner ads of larger size garnered more user interaction than the other ads deployed during the same time. Zhang, Wedel, and Pieters's (2009) experiment revealed that ad design features, including ad size, can affect consumers' attention and the sales outcomes.

Despite the enhanced capabilities of mobile systems, little research has empirically explored how the interface factors of hand-held devices influence mobile advertising effectiveness. Vatanparast and Butt's (2010) interview with mobile advertising practitioners shows that the device interface is a key factor that needs consideration during the development of mobile advertisements. They also suggest that the effect of device interface be tested among mobile phone users, especially those across different demographics in different countries. Thus, this study asks the following question:

RQ1: How will the interface design factors of the hand-held devices, including screen size, ubiquity, ease of use, interface complexity, and ads size, influence Chinese college students' a) emotional response to, and b) purchase intention of the advertised products?

Emotional Response to Advertising

For a long time little has been known about the role of emotion in marketing and advertising behavior (Bagozzi, Gopinath, & Nyer, 1999). Emotion is usually considered as a key psychological heuristic, or short cut, which helps make functionally adaptive decisions about appropriate behaviors in complex information environments when people only have limited cognitive resources (Lazarus, 1984; Lang, Newhagen, & Reeves, 1996; Zajonc, 1980; Zajonc & Hazel, 1982). Roseman and Smith (2001) think that emotions serve as appraisal states guiding coping behavior: to approach or avoid (Plutchik, 1984).

There are two main competing views of emotions: the discrete emotions view and the dimensional emotions view. Proponents of the discrete emotions view argue that basic emotions, such as anger, fear, sadness, happiness, and surprise, are present from birth, have distinct adaptive value, and differ in important aspects, such as appraisal, antecedent events, behavioral response and physiology (Ekman, 1992). The dimensional theory of emotion, in contrast, proposes that emotions are fundamentally similar in most aspects and most of them can be positioned on two dimensions: the valence dimension and the arousal or intensity dimension (Fehr & Russell, 1984; Watson & Tellegen, 1985). The valence dimension reflects the degree to which an affective experience is negative (unpleasant) or positive (pleasant), while the arousal/intensity dimension indicates the level of activation associated with the emotional experience and ranges from very excited or energized at one extreme to very calm or sleepy at the other.

The role of emotion in advertising was not recognized until the 1980s when researchers started to demonstrate that feelings impact the decision making process as well as the formation of judgments on advertising (Batra & Ray 1986; Burke & Edell, 1989; Holbrook & Batra, 1987). Now, marketing research has indicated that emotions induced by advertisements

can influence consumers' cognitive processes (Bagozzi, Gopinath, & Nyer, 1999) and behavioral intentions (Chang, 2006; Duncan & Nelson, 1985; Ellsworth, 2003). Positive emotions, either induced by an ad itself or in the context of the ad, have positive effects on the formation of an attitude toward that ad as well as the advertised brand (Goldberg & Gorn, 1987; Shapiro, MacInnis, & Park 2002). For example, Chang (2006) found that entertaining advertising can change consumers' emotional states, which enhance ad believability, ad approval and brand favorability. Similarly, Duncan and Nelson (1985) analyzed 157 respondents' responses to advertising and found entertaining advertising induced positive emotional responses, which influence ad approval and irritation. More recently, Hyun, Kim, and Lee's (2010) study about the chain restaurant industry demonstrates that pleasurable emotional response to the advertisement positively predicts consumers' perceived values of the restaurant. Negative emotions such as disgust, however, have been found to be able to reduce people's purchase intention of fast food (Shimp & Stuart, 2004) and negatively influence attitude toward the brand and recall (Dens, De Pelsmacker, & Janssens, 2008). Thus, this study asks the following research question:

RQ2: How will people's emotional response to mobile advertising influence their intention to buy the advertised product?

Message Factors Influencing Advertising Effectiveness

Based on the Theory of Reasoned Behavior (TRB), the Technology Acceptance Model (TAM) and the Extended Technology Acceptance Model (TAM2), scholars have found that mobile advertising message factors such as informativeness, credibility, entertainment and irritation are the main factors that influence people's attitude toward ads as well as their purchase intention (Choi, Hwang, & McMillan 2008; Du, 2012; Haghirian, Madlberger, & Tanuskova, 2005;

Tsang, Ho, & Liang 2004; Xu, 2006; Yang, Zhou, & Liu, 2010). These models have been tested in the United States and Asian areas without taking the device interface factors into consideration. Thus, this study will ask the following research question:

RQ3: After controlling for the interface design factors of the hand-held devices, will message factors such as a) entertainment, b) informativeness, and c) message credibility still influence the effectiveness of mobile ads among Chinese college students?

METHOD

Sample

A survey was administered in a large public university in Beijing in 2011 and generated 442 usable questionnaires. Undergraduate and graduate students were recruited from different departments by the researchers in exchange for course credits. The survey was done in classes. The age range of the respondents was 17-32, with a mean at 21.52 (SD = 3.73). Among the 442 respondents, 62% (N = 274) were female and 38% (N = 168) were male.

The university student sample was chosen because students are the focal interest of the study (Hanley & Boostrom, 2011). Demographically, it is well known that mobile data usage shows a very strong skew toward youth (Hanley & Becker, 2008). According to the Pew Internet Life study (2008), 96% of 18-29 year olds with a mobile phone or PDA have used one or more mobile data services. ComScore Networks (2006) even labeled 18-24 year olds as the "Cellular Generation."

Measurement

Interface Design Factors of the Hand-held Devices

Subjects were asked whether they agree with the following statements: "I like my hand-held device because it is ubiquitous," "I like large screen," "I think the interface of my hand-held device is too complex," "I like the hand-held device with friendly interface," "I like the hand-held device that has an easy-to-use

interface," and "I think mobile ads size should be large." These items were measured on a 5-point Likert scale with 1 representing "strongly disagree" and 5 representing "strongly agree."

Emotional Response to Mobile Ads

Measurement was done using a pencil and paper version of the Self-Assessment Manikin (SAM) pictorial scale (see Appendix A), which is widely used to measure emotion in psychology and marketing research (Bradley & Lang, 1994; Hodes, Cook, & Lang, 1985). SAM was designed to represent a range of emotional responses along valence and arousal dimensions using five figures for each dimension. The valence dimension depicted a figure that ranged from *positive* (1) to *negative* (5); SAM figures ranged from a smiling face to a frowning face. The arousal dimension ranged from *calm* (1) to *excited* (5); SAM figures ranged from having an inactive body and closed eyes to having an active body and open eyes. Respondents were asked to circle the corresponding SAM figures to indicate how they feel when they receive mobile ads.

Purchase Intention

Five-point Likert scales with end points of "strongly disagree" (1) and "strongly agree" (5) were used to examine subjects' purchase intention of advertised products. Two items were asked: "I will purchase the products in mobile ads" and "I will recommend the products in mobile ads to others." Purchase intention score then were calculated by taking the mean of the two items (Cronbach's $\alpha = .76$).

Entertainment

Measurement was done through asking subjects' agreement with the following statements: "I think mobile ads are entertaining," and "I think mobile ads are interesting." The mean of the two items were calculated and a new index was created (Cronbach's $\alpha = .87$).

Informativeness

Measurement was done through asking subjects' agreement with the following statements: "I think

mobile ads can provide me with in-time information” and “I think mobile ads can provide the information that I need.” The average score of the two items was used to form a new index (Cronbach’s $\alpha = .90$).

Credibility

Measurement was done through asking subjects’ agreement with the following statements: “I think the source of mobile ads is credible” and “I think the content of mobile ads are credible.” The mean of the two items were calculated. A new index of credibility was created by taking the average score of these two items (Cronbach’s $\alpha = .89$).

RESULTS

RQ1: How will the interface design factors of the hand-held devices, including screen size, ubiquity, ease of use, interface complexity, and ads size, influence Chinese college students’ a) emotional response to, and b) purchase intention of the advertised products?

Hierarchical regression analysis (Table 1) shows that the ease of use ($\beta = .11$, $p < .05$) of mobile devices will make consumers feel more positive toward mobile ads. For arousal, screen size of the device ($\beta = .11$, $p < .001$) and ads size ($\beta = .08$, $p < .05$) positively predict people’s arousal. Respondents feel more excited about the mobile ads when the screen size or the ads size is large. In total, the block of interface design factors explains 2% of the variances in arousal ($F(6, 436) = 4.48$, $\Delta R^2 = .02$, $p < .001$).

The ubiquitous feature of the mobile device also makes respondents more likely to purchase the advertised products ($\beta = .13$, $p < .01$). People tend to purchase the advertised products if the screen of the device is large ($\beta = .14$, $p < .01$). Interface design factors overall are significant in the final model ($F(5, 339) = 3.54$, $\Delta R^2 = .045$, $p < .001$).

RQ2: How will people’s emotional response to mobile advertising influence their intention to buy the advertised product?

Though neither valence nor arousal has an effect on purchase intention, emotional responses as a whole significantly predict purchase intention ($F(2, 334) = 4.67$, $\Delta R^2 = .02$, $p < .01$).

RQ3: After controlling for the interface design factors of the hand-held devices, will message factors such as a) entertainment, b) informativeness, and c) message credibility still influence the effectiveness of mobile ads among Chinese college students?

After controlling for the interface design factors, hierarchical regression analysis shows that entertainment ($F(1, 441) = 21.08$, $\Delta R^2 = .10$, $p < .001$) and informativeness ($F(1, 441) = 5.58$, $\Delta R^2 = .01$, $p < .05$) still predict valence. When mobile ads are entertaining, people will feel more excited ($\beta = .10$, $p < .01$). Informativeness also increases respondents’ arousal ($\beta = .15$, $p < .001$) when they receive mobile ads and increases their purchase intention ($\beta = .14$, $p < .01$). Message credibility will help to increase purchase intention ($\beta = .05$, $p < .05$).

DISCUSSION

Using a cross-sectional survey design in China, this study empirically examines the influence of the interface design of the hand-held device on college students’ emotional response to mobile ads and their purchase intention of the advertised products. Moreover, we explored the role of emotion in mobile advertising effectiveness. First, we identified several interface design factors that may exert impacts on mobile advertising effectiveness. These interface design factors include mobile devices’ ubiquitous feature, screen size, interface complexity, interface friendliness, ease of use, and ads size. Second, we found that emotion, as a key psychological heuristic or shortcut plays a significant role in influencing consumers’ purchase intention.

The interface design factors as a group strongly predict Chinese college students’ emotional response to mobile ads as well as their purchase intention.

Table 1: Hierarchical regression analysis summary: Predicting emotional response to mobile ads, and purchase intention by interface design and message factors

	Valence β	Arousal β	Purchase Intention β
Step 1			
Ubiquity	.06	.08*	.13**
Screen size	.10	.11**	.14**
Interface complexity	-.05	-.02	-.06
Interface friendliness	.09	.07	.08
Ease of use	.11*	-.02	-.04
Ads size	.06	.08*	.04
R ² Increase	.03	.02	.05
F Change	1.30	4.48**	3.54**
Step 2 Entertainment	.21***	.10**	.03
R ² Increase	.10	.06	.05
F Change	21.08***	12.12***	19.77***
Step 3 Informativeness	.12*	.15***	.14**
R ² Increase	.01	.03	.03
F Change	5.58*	14.26***	14.29***
Step 4 Credibility	.03	.00	.05*
R ² Increase	.00	.02	.01
F Change	.68	.98	4.98*
Step 5	---	---	
Valence			.30
Arousal			.92
R ² Increase			.02
F Change			4.67**

* $p < .05$; ** $p < .01$; *** $p < .001$.

Specifically, large screen size and advertisement size will make people feel more excited about mobile ads and form a positive attitude toward mobile ads. Large screen can also increase the possibility for people to buy the advertised products. Previous studies have found that advertisement size is an important factor that influences online advertising effectiveness (Dahlen, Rasch, & Rosengren, 2003; Edwards, Li, & Lee, 2002; Li & Bukovac, 1999; Kim, Yoo, & Stout, 2003). This study confirms those findings.

We also found that consumers will dislike mobile ads if the interface is too complex. Goldstein, Nyberg, and Anneroth (2003) argued that user efficacy of

mobile devices decreases dramatically with their functional complexity. They stated that the porting of the stationary computer to a mobile multipurpose device may not be effective (p.373). Faiola and Matei (2011) also identified that one of the major problems in mobile interface design is its complexity. This calls for mobile device engineers and mobile advertisers to take users' cognitive resources and abilities into consideration when developing new interfaces.

We also found that the ubiquitous feature of mobile devices makes people more aroused when they receive mobile ads, and increases their chance to purchase the advertised products. Ubiquity and

mobility have been considered as the defining features of mobile devices (Lucky, 2012). This study shows that as one of the newest mediums, ubiquitous hand-held devices can keep arousal at a high level and deprive our brain's "down time" (the author). Thus, mobile industry practitioners may continue to develop more portable and easy-to-carry devices in the future and embed those devices within people's everyday lives, as suggested by the idea of ubiquitous computing (Weiser, 1991, 1993; Weiser & Brown, 1996).

However, we did not find strong effects of screen size on people's valence, which is different from findings in the experiments with small screens (Chae & Kim, 2004; Reeves, Lang, Kim, & Tatar 1999). It may be due to the reason that extremely arousing stimuli were used in those experiments to elicit subjects' strongest emotional response. Future mobile advertising research may implement experiments by using strong ads stimuli and varying screen size of the devices and examine if larger screen size can elicit subjects' emotional response to the ads.

Emotion has been regarded as an appraisal of the outside environment that can guide people's coping behavior: to approach or to avoid. This study shows that subjects' emotional response to mobile ads significantly predicts their purchase intention. Although neither valence nor arousal changes people's purchase behavior, emotional response as a whole is still significant in the final model to predict purchase intention. These findings echo other scholars' argument that emotion plays a key role in marketing and advertising (Bagozzi, Gopinath, & Nyer, 1999; Chang, 2006; Ellsworth, 2003; Hyun, Kim, & Lee, 2010). Moreover, we extend the discussion about the role of emotion to the new cutting-edge hand-held devices and find that as a new format of advertising, mobile advertising itself, instead of the specific advertising content, can elicit consumers' emotional responses, suggesting "the medium is the message" (McLuhan, 1994).

A recent stream of research proposes an innate ability of people called *emotional intelligence*. It involves "sophisticated information processing ... used as a guide to thinking and behavior" (Mayer, Salovey, & Caruso, 2008). From this perspective, emotion stands to help guide the allocation of scarce cognitive resources and coping behavior (Lang, 2000). An important component of the emotional intelligence perspective is that some people are better at employing emotional heuristics than others. Our study suggests that people who feel happy and excited with mobile ads tend to allocate more cognitive resources to process the ads information. Future experimental studies can go further to examine the influence of emotional response to mobile ads on people's cognition, such as attention to and memory of the ads.

MANAGERIAL IMPLICATIONS

Our study has important implications for industry practitioners in China and international markets. First, we identified several interface design factors that influence mobile advertising effectiveness, such as ubiquity, screen size, ease of use and advertisement size. Our study suggests that mobile devices with large screens can increase consumers' arousal and purchase intention and thus is essential for the success of mobile commerce. Large ads size is also helpful to promote positive valence and increase arousal toward mobile advertising. Therefore, advertisers may consider enlarging their ads size on mobile phones and incorporating colorful images to attract more attention and foster positive emotions among consumers.

Second, we found that consumers would prefer interfaces that are simple, convenient, and easy to use. Lee and Benbasat (2003) noted that consumers' shopping experience in a mobile context requires special attention due to the special mobile setting and the mobile interface constraints. They argued that consumers' emotional and cognitive resources

allocated to the mobile transaction are limited when they are multitasking and involved in other peripheral activities on mobile devices. Thus, interface design of mobile devices needs to take the multitasking nature of consumer behavior into consideration and support users' limited attention. Our study suggests that screens that are easy to use can promote more positive valence toward mobile advertising, which echoes previous findings with novice and low-literacy users (Medhi, et al., 2011). What we need to keep in mind is that the sample in this study is college students in a metropolitan city in China who are young, techno-savvy, better educated and have a higher level of technology literacy compared with the general population. Future designers and practitioners need to consider reducing the complexity and hierarchy of the interface to reduce the cognitive load and make it easier to navigate for the general users.

Third, our study found that Chinese young consumers value informative and credible mobile ads that can save them time and money. They also think highly of messages that are entertaining and interesting. This finding suggests that mobile marketers may take Chinese culture and tradition into consideration and develop more interesting, informative, and credible mobile messages targeting Chinese young consumers.

LIMITATIONS AND FUTURE RESEARCH

First, the sample in this study is college students in China, suggesting that the results in this study were limited to within the youth segment in China. Moreover, even college students in Beijing are not representative of young people in rural areas in China (Yang, Zhou, & Liu, 2010). Thus, conclusions in this study cannot be generalized to the whole population and researchers and practitioners should take them cautiously. Although youth is an increasingly important consumer segment for mobile advertising, it is vital to develop more age- or culture-specific mobile

marketing strategies and programs (Du, 2012). Future studies should use a probability sampling strategy and be extended to other groups with different demographics or culture to increase the external validity and test the robustness of the model.

Second, major dependent variables in this study such as emotional response to mobile ads and purchase intention were measured through self-report questions, which may bring bias and reduce the validity of the measurements (Davies, Stankov, & Roberts, 1998). Self-report measures usually assume that respondents are clearly aware of their emotional experiences and are accurate in their observations of their own behavior (Heimber, Turk, & Mennin, 2004). Future studies can adopt more objective and physiological methods such as eye tracking to monitor respondents' attention and emotional responses. Direct observation may be a more effective way to examine people's actual purchase behavior (Wimmer & Dominick, 2010).

Third, previous studies have suggested that attention to ads plays a significantly mediating role between exposure to ads and sales outcome (Zhang, Wedel, & Pieters, 2009). Future research may include attention to attitude toward mobile ads in the model and examine the mediating mechanism of attention and attitude behind the relationship between interface design factors and mobile advertising effectiveness.

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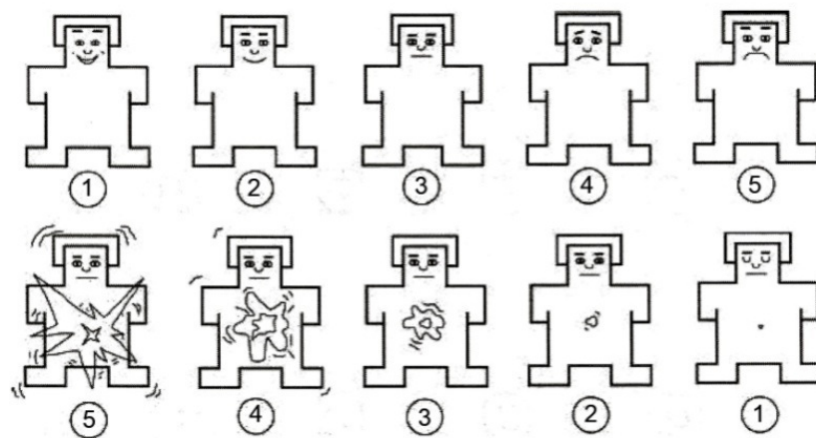
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Appendix: A Self-Assessment Manikin (SAM) pictorial scale



UNDERSTANDING THE ORIENTATION OF GEN Y TOWARD MOBILE APPLICATIONS AND IN-APP ADVERTISING IN INDIA

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Abstract:

Mobile marketing in India is expected to reach INR 1.2 trillion by the end of 2013, an 8% increase from INR 1.1 trillion in 2012. Smartphones are being used extensively in India by Generation Y individuals (those born between 1980-2000). The rise in smartphone usage is attributed to usage of mobile applications. The marketers are trying to cash in on this trend by approaching consumers through phone media. Since a majority of the heavy users belong to Gen Y, it is important to study how they interact with brands through mobile applications. This study attempts to comprehend Gen Y's attitude toward in-app advertising and branded applications. The authors adopt a qualitative approach to understand the consumer insights. Focus group discussions and in-depth interviews have been used to comprehend perception, liking and preference toward mobile applications and in-app advertising of Gen Y. The major determinants that formulated the attitude of consumers pertaining to in-app advertising were found to be: involvement with the app, hindrance caused by the ad, screen size, contextualization, personalization, relevance, credibility, permission, control and incentives. The study provides relevant insights for practitioners and also provides a scope for further research in the area.

Keywords: mobile marketing, India, mobile applications, Generation Y

INTRODUCTION

In 2013, the number of global mobile phone and cellular subscriptions reached 6.8 billion, which is almost equal to the world population of 7.1 billion. Interestingly, more than half (about 3.5 billion) of the global mobile phone users are from the Asia-Pacific region (The World in 2013 - ICT Facts and Figures, 2013). The mobile market in India is expected to reach INR 1.2 trillion by the end of 2013, an 8% increase from INR 1.1 trillion in 2012 (Gartner, 2013). Moreover, there has been a dramatic increase in smartphone subscriptions in India. The estimated number of users in 2013 is about 40 million; 50% of smartphone users are below 25 years of age. (Nielsen Informat Mobile Insights, 2013). This segment comprises 50% of the Indian population (Census of India, 2011), and a majority are classified as Generation Y (Gen Y), individuals born between 1980 and 2000 (Weingarten, 2009; Sayers, 2007). They

extensively use smartphones to conduct activities such as gathering information, connecting with friends, using social media, and using location-based services. Gen Y individuals are open-minded, optimistic, confident, independent, ambitious, competitive, energetic, hard-working, tech-savvy and impatient. This generation expects entertaining and fast paced information from the new media and digital technology. Being highly tech-savvy, they use multiple features in their smartphones (Jain & Pant, 2012). They have high disposable income (Holley, 2008; Waters, 2006) and high spending propensity (Xu, 2007; Jain & Pant, 2012). The Gen Y is flexible in adopting to new technology and extensively uses value-added services (Pant & Jain, 2012) such as QR codes to generate information for high involvement products (Narang, Jain, & Roy, 2012). This generation has shown a dramatic shift from traditional to new media over a period of time.

The usage of smartphones has increased in India as the cost of smartphones and data plans have decreased drastically in the last one year. The users are downloading mobile applications as they are curious about new domains and areas (Jain & Pant, 2012). This provides ample opportunities for marketers to use the mobile phone as a marketing media. Therefore, it is important to study GenY and comprehend their attitudes toward the mobile application as it may provide a vast array of approaches for the marketer to communicate to its audience without facing the risk of rejection. Moreover, investigating the mobile phone usage habits of Gen Y would enlighten researchers with consumer behaviour from interactive media. The present study thus aims to explore Gen Y's attitude toward in-app advertising and branded applications. Subsequently, the next section provides a literature review on mobile marketing and Gen Y followed by the methodology and major findings. In the last section, authors provide a discussion of the findings, practitioner implications and conclusion.

LITERATURE REVIEW

Mobile Marketing

Mobile marketing in India is primarily comprised of SMS (text) marketing, marketing through QR codes, Bluetooth advertising and in-app advertising. Mobile marketing has inherent attributes such as personalization, ubiquity, interactivity and localization, which differentiate it from other forms of media (Ranchhod, 2007). According to Woodside and Soni (1991), the response rate to mobile marketing is higher than that of traditional media as it can be customized and is more interactive with the consumer. In the context of permission marketing, it has been found that if a commercial message is personalized, it may be perceived as valuable information as opposed to "interrupt marketing" (Barnes & Scornavacca, 2004). Customization helps

the marketer reduce the negative reaction to the message (Barnes, 2002).

Asian consumers have shown more receptivity as compared with their Western counterparts in terms of mobile marketing. For example, in a cross-cultural study it was found that Gen Y in China have a more positive attitude toward mobile marketing as compared with French and American Gen Y. Likewise, Gen Y in India were found to share information related to brands via mobile phones (Jain & Pant, 2012). Researchers (Bush, Martin, & Bush, 2004; Noble, Haytko, & Phillips, 2009; Jain, Pant, & Daswani, 2011; Pant & Jain, 2012; Jain & Pant, 2012; Pant & Jain, 2013; Narang et al., 2012) have found mobile marketing strategies to be effective with Gen Y compared with traditional marketing strategies. The various ways in which marketers' use mobile marketing are discussed in the next sections.

SMS Marketing

SMS marketing is helpful in direct marketing and targeted promotional activities. SMS marketing enriches television and print campaigns when used as a complementary marketing tool (Wouters & Wetzels, 2006). SMS and MMS (multimedia messaging service) marketing increase brand recall and develop a strong association with the purchase intention (Li & Stoller, 2007). This engagement could be achieved through relevance, humor, or by building user curiosity. However, the length of an SMS message is only 160 characters, making it challenging for marketers to develop effective interactive messages. Indian consumers have been found to want to control the frequency of messages, while maintaining privacy. Personalized messages based on location and timing of the message increases the involvement of the consumer in that brand (Jain et al., 2011). In another study, it was observed that brand recall is high for text messaging campaigns for 46% to 64% of respondents and redemption of in-store coupons could reach up to

80% for such campaigns (Kavassalis, Spyropoulou, Drossos, Mitrokostas, Gikas, & Hatzistamatiou, 2003).

QR Codes

QR (Quick Response) codes are an emerging tool in the field of mobile marketing. They help consumers to interact with static media such as print and online forums in a rapid manner (Ebner, 2008). When QR codes are set up properly they integrate with different media and are useful in measuring the overall effectiveness of a campaign. They also help in gaining information about the average time spent, geographic location and comprehensive details about the consumers such as emails, contacts, SMS and IM (Bonthous, 2011). In a consumer study it was found that scanning QR codes is an easy task and many consumers use these codes as they help them speed up the buying process (Consumer Pulse, 2011). Consumers may scan QR codes to receive discounts and to pacify their curiosity level. It has also been identified that the usage of QR codes are higher for high involvement products as compared with low involvement products as consumers are eager to find more information about high involvement product categories (Narang et al., 2012).

Bluetooth Advertising

Bluetooth advertising is a location-based technology used to deliver messages, information or advertisements through mobile phones or other mobile devices. It helps marketers to develop location specific advertisements (Bruner II & Kumar, 2007). This approach also helps the marketer to develop more relevant messages and selective messages for the targeted consumers. However, privacy and security of consumers is a major concern (Leek & Christodoulides, 2009). Many consumers are not aware of the security features that are associated with this technology. Bluetooth technology also has high battery consumption. Research has found that the future of Bluetooth technology will be primarily determined by two dimensions: peer influence and

the curiosity level of users (Cockrill, Goode, & White, 2011).

In-App Advertising

In-app advertisements are those campaigns that are portrayed through mobile applications. The most common form of display ads are banner ads. Another form of in-app advertising is based on location of the mobile subscriber. In-app ads help marketers develop more relevant and specific advertisements for consumers. Moreover, research has found that the perceived intrusiveness of a location congruent ad is less as compared to a location incongruent ad (Huhn, Khan, Gisbergen, & Nuijten, 2011). In-app advertising can be measured through metrics such as cost per impressions, cost per click and cost per acquisition. The common ad formats are on-screen banner ads which are displayed along with the content of the screen, interstitial ads which are featured before or after the activity in the app, click-to-expand ads and out-of-app ads.

Interstitial ads are often used in games and applications which have a sequence. The user completes one part of the activity on the app and then moves on to another level. These ads are effective as the user is expecting a break and is more receptive to advertisements. Click-to-expand ads are those ads that expand in size with comprehensive information about the brand on the same page. In this case, the user is not redirected to another page and hence it saves time. Out-of-app ads stay on the device even after the user stops using the app. However, this type of advertising could be viewed as a disruption of privacy, as the user has not signed up for receiving ads on the device after the application is closed.

Branded Applications

Branded applications are those mobile applications that are developed by companies in order to build the brand. They can help in enhancing the existing business or facilitate in reaching the

prospective consumer. Moreover, an online service can also be extended through these applications. A branded application provides valuable utility to the consumer and establishes emotional connection with them. Branded applications are used by established companies and are useful in brand building.

Gen Y and Mobile Applications

Gen Y have high income (Holley, 2008) and exaggerated spending habits (Jain & Pant, 2012). It has been observed that Gen Y multitask with technology as it portrays their personality traits (Kofman & Eckler, 2005). They are comfortable with technology and use multiple media platforms such as cell phones, laptops, multimedia, instant messaging, and social networking for communication. This generation integrates technology with their day-to-day activities (Oblinger, 2003; Weingarten, 2009). Gen Yers like amusement and are very excited about the creative and customized communication via mobile phones (Jain & Pant, 2012). They believe that mobile phones can portray their personality, which excites them to use this media extensively as value-added services (Pant & Jain, 2012). Gen Y prefers creative, personalized and engaging messages on their mobile phones. They like to decide the content and frequency of the promotional messages. Moreover, Gen Y are very flexible in adopting new brands as they are adventurous and believe in immediate gratification. This segment has high purchasing power (Jurisic & Azevedo, 2011) and usually spends money quickly on consumer goods and personal services (Xu, 2007).

Even though the area of mobile marketing is well researched, there are few studies in the area of consumer behavior with respect to mobile applications. Moreover, there are only a handful of studies on the usage of mobile applications in developing countries, including India. Given the fact that there are close to 40 million smartphone owners in India (Nielsen Informate Mobile Insights, 2011), it is very important for marketers to understand consumer

attitudes toward in-app advertising and the dimensions related to it. However, to do so an overall understanding of smartphone usage among the prime target of Gen Y becomes all the more important. This study thus tries to address three broad research questions:

RQ1: What is the overall perception of Gen Y with respect to smartphones and mobile applications?

RQ2: What is the usage behavior of Gen Y with respect to mobile applications?

RQ3: What and how does Gen Y develop liking, preference and desire toward branding activities promoted through mobile applications?

METHODOLOGY

A qualitative approach was used in the present study to explore in-app advertising and its effectiveness on Gen Y. Focus group discussions and in-depth interviews were selected for this study. Focus group discussion emphasizes group interactions where participants discuss and analyze different perspectives of a particular issue (Morgan & Krueger, 1993). This is useful in assessing how opinions converge or diverge within a particular group. It also allows differences between groups to be evaluated, with assessment of whether particular groups of people have similar experiences based on their common characteristics. An In-depth interview uncovers greater insights than focus group discussion. It results in a free exchange of information and detailed probing of the respondent (Malhotra, 1996). In-depth interviews were therefore chosen for this study in order to identify deeper attitude and behavior pertaining toward smartphones and the usage of mobile applications.

Protocol

Initially, a set of broad questions was drafted as the protocol based on the review of the literature. The protocol was then reviewed and refined by the authors for relevance and the questions were arranged in a logical sequence for discussion. The

protocol was divided into three phases. The first phase was related to mobile device ownership and smartphone usage. This allowed each respondent to answer and provide a broad indication of how the smartphone was being used. The second phase was about mobile applications and the utility derived from mobile applications. The third phase was related to consumer attitudes toward in-app advertising. The focus group discussions and the in-depth interviews were conducted by the authors. The authors spent two hours for each focus group discussion and one hour for each in-depth interview. The time spent on the first phase was 15-20 minutes, the second phase was 20-25 minutes and the third phase lasted approximately one hour.

Broad questions were asked about the type of applications in which the respondents were comfortable receiving advertising messages. Questions were asked related to the preferred advertisement format and optimum location of the ad on the smartphone. In addition to this, questions related to in-app advertising were asked to determine the underlying dimensions which govern the attitude formation. Respondents were also asked how they interact with known and unknown brands through mobile applications. They were probed about how their experience with in-app advertisements can be improved. Respondents were also encouraged to discuss the challenges, improvements and expectations from mobile applications and in-app advertising.

Recruitment

Authors recruited respondents in the age range of 22-32 years who owned a smartphone, and who download and use mobile applications. The authors conducted four focus group discussions with eight respondents in each discussion. The in-depth interviews were conducted with a different set of respondents but belonging to the same population. The focus group discussions and in-depth interviews

were recorded with the prior consent of the respondents. Verbatim transcripts were developed from the focus group discussions and the in-depth interviews. Subsequently, content analysis was undertaken and themes were identified as suggested by Palan, Gentina, and Muratore, (2010). Themes emerging from the qualitative responses were identified and coded for further analysis. Authors reviewed the themes using three iterations, where comparisons and repetition of content were undertaken. The final interpretation was developed through the emerging insights, prior literature, guideline framework and objectives of the study.

THEMATIC CONTENT ANALYSIS

Interaction with Smartphone and Apps

Smartphone Usage

Respondents use their smartphones extensively and use it most of the time. A respondent mentioned that, "I use my phone first thing in the morning and last thing at night." Smartphones were used extensively by the respondents while they were travelling as they consider it to be a source of entertainment. Many respondents mentioned that they used their smartphone for at least 2-3 hours in a day. Respondents did not consider their smartphone as a distraction, but as a constant source of entertainment. A respondent emphasized that, "I use smartphone applications for information, connection, entertainment and passing time." Moreover, respondents constantly check their messages and emails and update their status on different social media through their smartphones. For example, a respondent stated that, "I keep checking my phone all the time to see if there is any update." They used smartphones along with other traditional media. A respondent emphasized that, "I use the smartphone while watching TV and the show is not particularly interesting."

Mobile Application Usage

Respondents use mobile applications to perform several activities which have been performed through personal computers. This included reading newspapers and blogs, listening to music, chatting with friends, receiving and responding to emails and accessing social media. According to one respondent, "Mobile applications are accessible faster and one does not have to navigate the Internet to look for what one needs." Several respondents do not use voice calling or messaging for communicating but use mobile applications as they are more convenient. Many respondents stated that they check and respond to emails frequently on their smartphones which made their life easier. They also frequently access social media websites such as Twitter and Facebook through mobile applications. Respondents mentioned that mobile applications helped them to grow their business as they were able to organize their activities in a better manner. A respondent emphasized that mobile applications also helped in reducing stress.

Types of Mobile Applications

Gen Y uses applications pertaining to messaging, social media, music and games on their smartphones. They also use applications to send messages to their friends and family members. According to one respondent, "Every application fulfills a specific need in my life." This means that each application was downloaded for a particular need or requirement. The respondents also stated that they do not spend much time on a particular application besides the game-based applications.

Mobile Applications and Gender

When the responses of men and women were compared, it was found that men were more passionate and enthusiastic about game-based apps as they download new apps more frequently than women. Men discussed different mobile applications with their friends more frequently than women. A respondent stated that, "If some applications were

targeted only toward men, it would be more effective."

Payment

Consumers were not willing to pay for applications. Some mentioned that they identify free-to-oversions to games and did not spend on premium versions of a gaming application. One respondent stated that, "Apps are neither indispensable nor exclusive. If one app is charging for a utility there are others which provide the same for free."

Socializing Through Applications

Respondents claimed that they discuss the latest applications with their friends. Friends seem to be the primary and most important influencers in determining the choice of applications that are downloaded. Some respondents emphasized that they actively search for new app servers every day. The number of downloads and the rating of the app is evaluated by the respondents before downloading it on the smartphone. Some respondents follow bloggers who recommend new and trendy applications. Apps are mainly used to chat and socialize with friends. Social media such as Facebook and Twitter are also accessed through mobile apps. Users prefer and download chat-based apps which act as a network for connecting friends. Many respondents post their games' score on Facebook and challenge their friends to play the same game in an efficient manner.

GEN Y AND IN-APP ADVERTISING

The key determinants of consumer attitude toward in-app advertising were identified as follows:

Involvement With the App

User's involvement in an application is an important construct, which determines their attitude toward in-app advertising. The more involved and engaged a user is with an application, the more negatively he perceives the advertisement. Respondents get irritated when ads are displayed

when they are playing games or when they are chatting with their friends. However, several respondents were comfortable with ads displayed in newspaper apps and while browsing on the web. It was also found that ads through mobile applications of music, business and organizers were acceptable.

Hindrance Caused by the Ad

The hindrance that an ad causes to the app experience is an important dimension in determining the attitude toward the advertisements. Respondents stated that the hindrance caused by an ad is further dependent on two factors: the location of the ad and the format of the advertisement.

Location of the Ad

The location where the ad is displayed in an app is very important for the respondents. If the ad is displayed in a location that hinders the gaming experience of the user, then it causes irritation. However, banner ads that appear on the top or bottom of the screen are less irritating. Respondents stated that ads that appear after completing one level in the game or on the loading screen are less intrusive.

Ad Formats

Respondents do not prefer pop-up ads and video ads as it annoys and disturbs them. Another problem with video ads is that they take up a larger bandwidth, which the users do not prefer. Some respondents felt that animated banner ads are more noticeable as compared to static banner ads. Respondents stated that they do not click on ads, as it redirects them to another page. They mentioned that their work gets disturbed if they start browsing for more information of the brand on the cellphone. One respondent said, "I would prefer an ad which expands on clicking as compared to an ad which redirects me to another page."

Screen Size

The screen size also plays an important role in determining the attitude toward in-app advertising. Several respondents stated that the small screen size

of the phone had caused them to click on banner ads accidentally, which they found to be a nuisance. Respondents with phones having larger screens also stated that in-app advertisements were not very legible.

Contextualization

Respondents find contextual ads to be useful and relevant and would prefer such ads. According to one respondent, "If I am using a food related app, I would definitely like to see ads of restaurants."

Personalization

Respondents cited that they would be more interested in a customized ad. One respondent stated that he would like it if a brand customizes its ad for him. Other respondents mentioned that an SMS ad would feel more personalized as compared to an in-app ad.

Relevance

The relevance of an advertisement to the consumer is an important factor that governs the click-through and perceived usefulness of the ad. Consumers click on only those ads that seem to be trustworthy. There is a higher probability for a familiar brand's ad to receive a click than that of an unknown brand.

Credibility

Brands that advertise only through in-app advertising are not considered to be credible by the respondents. They stated that in order to trust a brand being advertised inside an app, they should have seen the brand being advertised in at least one more media. According to one respondent, "I wouldn't trust a brand which is advertised only through in-app advertising. But, if the ad tells me if my Facebook friends have liked the brand, then I will feel it is more credible."

Bluetooth or Geo-Targeted Ads

Gen Y likes using location-based applications and services. Most respondents did not mind sharing their location with an application. However, they do not

want to watch similar advertisements repeatedly. Respondents prefer geo-targeted ads on location-based applications but not on others. One respondent stated, "I will use a location-based application. When I want to be geo-targeted, it will be my decision." Respondents mentioned that it is very important that an app takes their permission before accessing their location. Many respondents had used location-based coupons while shopping and found them useful. They also cited that they download some mobile apps only to receive discounts of various brands and products.

Incentive

Respondents found ads with incentives such as discounts, offers and promo codes very useful. They are more likely to click on ads with incentives than ads without incentives. One respondent stated, "Since the brand is using my mobile phone to advertise, it should give me an added benefit." Moreover, respondents viewed incentives as a compensation for being disturbed while using an app.

Gen Y and Brand Interactions Through the Phone

Respondents mainly recalled brands whose ad they had previously seen on television. They remembered many product categories but fewer brands. They were able to recall the brands that use different media for advertisements and feel that in-app advertising adds to it. The respondents stated that if they were unaware about the brand then they may not notice it. They noticed the brand only if the message and the execution of the ad is appealing. Many respondents stated that they would click through the ad only if it had promotional offers, new launches, deals and freebies. Respondents emphasized that for an unknown brand to get a click-through, the message of the brand should be exceptionally appealing and relevant to the user. If the ad is clicked through, the user will navigate through the landing page and the website of the brand to get more information about the brand. The user will then screen through the website of the brand through his

laptop and then will check the credibility of the brand through third-party sources and influencers such as friends before making the final purchase. Respondents were more willing to disclose their personal information with established brands. Moreover, they are willing to share data through online banner ads as compared to in-app ads. Respondents said that they would not share their data with an unknown brand even if an incentive was provided to them.

A respondent stated that she immediately recognizes the logo of a known brand in the case of in-app advertisements. If respondents found the message of the ad appealing, they would look for more information. Respondents emphasized that even after clicking through the ad, they will not use their mobile phones to search for more information about the brand. They will instead use their laptop or the desktop to search for more information about the brand. The final purchase (in the case of e-commerce websites) would be conducted through their laptop or desktop as the mobile screen is small and connectivity is weak.

Respondents are eager to use branded content. A subtle integration of a brand with the storyline of an app would enhance the user experience. Respondents stated that they would find such integration interesting, as it breaks the monotony. They also claimed that this would help them to remember and recall the brand.

The branded applications that currently exist in the market extend their online service or functionality to the smartphone. Many applications mentioned by respondents are transactional in nature. However, many respondents indicated that they make transactions through branded apps but may not use their mobile phones for online shopping. Several respondents cited that they would download only utility-based branded apps. The relationship of the brand with the user also determines whether they use the downloaded app. If a brand provides incentives to

download the app such as discounts and promotional offers then respondents are eager to download it.

Mobile apps provide a good opportunity for a brand to build engagement and increase loyalty. Respondents mentioned that downloading the branded app has made them more brand loyal as compared to the brand that provides some incentives to use the app. Furthermore, respondents stated that they would like it if branded apps tracked their purchase history and made recommendations to them. Many respondents stated that they would like to engage with their favorite brand through an app. One respondent mentioned that he downloaded the app of his favorite football club, because it provides him with match schedules, updates and insider information on the team. He claimed that he likes to engage with the brand through this app. Another respondent said that she would like to engage with an inspirational brand through an app.

DISCUSSION

The present research has tried to answer the three research questions and has found some answers in the context of Gen Y in India. With respect to RQ1, Gen Y members were found to use their mobile phones consistently and continuously. They were dependent on their mobile phones and hence extensively used informational applications. Gen Y was continuously active on various social networking sites, chat applications and game applications from their mobile phones making it an extremely important part of their life. This finding was consistent with the previous studies (Cisco Connected World Technology Report, 2012).

Gen Y download chat, games and social networking applications on their smartphones. It was observed that applications had become a social phenomenon. Friends' recommendations are important in deciding which app to download. This finding was in accordance with previous literature.

This study also stated that the adoption of mobile applications appears to spread via social contagion (Taylor, Voelker, & Pentina, 2011). With respect to RQ2 and RQ3, previous research found that intrusiveness of an ad lead to the feeling of irritation. If an ad is perceived to be intrusive it is unlikely to elicit positive attitudes in consumers (Li, Edwards, & Lee, 2002). Similar to those findings, the present study also supports the concept of permission marketing. Beneke, Cumming, Stevens, and Versfeld (2010) suggest pre-approval by the respondent before sending the communication as they would prefer to control the messages. However, in the present study it was also found that consumers do not mind the in-app advertisements at the end of a level in a game. These may act as fillers and allow retreat for the consumer from satiation while playing a game (McSweeney & Swindell, 1999). But, the more a user is involved in an application the more negatively he perceives the advertisement if it pops up in the middle of the game. Advertisements during a game or chat cause irritation, but music or newspaper applications were acceptable.

In research by Bauer, Barnes, Reinhardt and Neumann (2005), it was found that entertainment value and information value are the strongest drivers of attitudes toward mobile advertising. However, in the present study it was observed that pop-up ads and video ads cause disturbance even if they had information value. Lastly, the findings that contextualization and relevance affect consumer behaviour support the well-established congruence theory (Fleck & Maille, 2010). The present study findings suggest that congruence of the ad context with the app would make the consumer more favourably oriented toward it. Thus, the marketer should try to put his/her ad with matching apps to get better results.

MANAGERIAL IMPLICATIONS

The findings indicate that brands need to broaden their horizon of mobile marketing with respect to Gen Y. Along with pop-up ads, video ads and banner ads, they need to develop interactive and entertaining brand-based applications as Gen Y download such apps and thus brand loyalty can be increased. Also, Gen Y has a positive attitude toward branded apps and they are willing to experiment with new apps, so they are willing to try out branded apps that are useful and engaging. The brands can develop a brand story and integrate it with the story of the game to make it interesting for the users, as consumers find games very engaging and are deeply involved in it. Consumers trust an unknown brand only when it is recommended by their friends or when they have seen the advertisement of the brand on any other form of media such as a social networking site or television. This implies that the marketers need to increase their visibility on more than one media in order to earn the trust of the consumers. Consumers are very keen on location-based apps and are comfortable with geo-targeting only within these apps. They would like to receive location-based discounts, coupons and information on new launches. Retailers must, therefore, actively use location-based services to target this generation.

Interstitial ads are more acceptable as compared to banner ads in the case of game-based apps. Therefore, mobile professionals can develop interstitial ads rather than banner ads. Gen Y would be more open to receiving ads in apps such as newspapers utility, organizers, music, tools, and shopping rather than advertisements that pop ups in games, chats and social networking apps. The ad format most suited for apps is the click-to-expand ad which gives more information without re-directing to another page. App developers and publishers must move toward developing branded content, engaging users by blending the brand with the story of the app.

Such apps will not only be engaging but also entertaining. The brand names and logos will receive due attention in such situations. The brand recall will definitely improve through good branded content. Such branded content will be well received by users and companies. Gen Y would also be open to service-oriented apps, shopper apps, location-based apps, and deals- and discount-based apps. These are the areas they should explore for development. The arena of shopper apps must be explored over the next few years.

CONCLUSION

This research offers insights on the orientation of Gen Y toward mobile applications and in-app advertising in a developing nation context. The study emphasizes the fact that although Gen Y does not mind in-app advertisements they prefer ads that are based on involvement with the apps, less intrusiveness of the ad, relevance, context, personalization, credibility, and its usefulness. It was found that in-app advertising leads to higher brand recall and this association can be further strengthened to generate purchase intention.

The current research has four major contributions on Gen Y's orientation toward mobile application and in-app advertising. First, consumers extensively use mobile phones and they spend a majority of their time in mobile apps such as social apps, games, chats, messaging, emails, music, videos and news. Second, Gen Y consumers prefer click-to-expand ads rather than re-directing to other page. Third, Gen Y prefers interactive and engaging brand apps of their favorite brand and brand story-based games. Fourth, they like Bluetooth or geo-targeted ads but only through an especially geo-targeted application controlled by the consumer.

LIMITATIONS AND FUTURE RESEARCH

This research forms the starting point for further research in the area of in-app advertising. It also opens up other areas such as media integration through mobile applications, use of mobile applications in building brands and building brand loyalty. This research was qualitative in nature; the end result produced an explanation of observable fact that can be delineated in depth but may suffer from broad generalizability. Therefore, future studies involving quantitative research techniques and a larger population would improve the validity of the results. Moreover, cross-cultural studies are recommended to compare consumer's attitude toward in-app advertising in developed and emerging countries. This study only covered in-app advertisements in mobile phones and thus could also be extended to understand consumer attitudes toward in-app advertisements in tablets as well. Further studies on mobile payments and QR codes can be undertaken to understand the consumer perspective.

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A TCPA FOR THE 21ST CENTURY: WHY TCPA LAWSUITS ARE ON THE RISE AND WHAT THE FCC SHOULD DO ABOUT IT

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Abstract:

Litigation related to the Telephone Consumer Protection Act (TCPA) has increased exponentially over the past several years, by more than 60 percent by some estimates in 2012 alone. The law was written more than two decades ago for yesterday's technology to prevent harassing and unwanted calls to consumers. Some plaintiff's lawyers are taking advantage of the well-intended but outdated TCPA statutory language to invent novel legal theories under which to sue companies that are communicating with consumers in ways that were not invented twenty years ago. The Federal Communications Commission must move quickly to clarify the meaning of "capacity" under the TCPA by taking into account today's technology. The FCC should start by clarifying that modern dialing technologies are not "automatic telephone dialing systems" under the TCPA unless they possess the current ability "to store or produce telephone numbers to be called, using a random or sequential number generator [and] to dial such numbers." Without regulatory changes frivolous lawsuits will continue and substantial resources will continue to be wasted, hurting consumers and businesses alike.

Keywords: ATDS, autodialer, FCC, Telephone Consumer Protection Act, TCPA

INTRODUCTION

The Telephone Consumer Protection Act (TCPA) was signed into law in 1991, more than twenty years ago, with the specific purpose of stopping harassing and unwanted phone calls to consumers. Over the past few years there has been an astonishing increase in the number of TCPA lawsuits alleging violations of the TCPA, with one study estimating that TCPA lawsuits rose by 63 percent in 2012 alone (WebRecon, 2012). So what is the cause of this explosive increase in litigation? The answer seems to be a confluence of factors: modern technology allowing companies to reach multitudes of consumers in a short amount of time, no limits on damages combined with litigation that is often unchecked by any common sense application of the statutory language to modern technology, and the lack of an updated regulatory interpretation of the decades-old statutory language that takes into account how consumers and businesses communicate today.

Obviously, technology has changed over the past twenty years, allowing companies to communicate with consumers much more efficiently in many ways, including by text or by dialing numbers using a software system rather than manually. However, each individual communication that a company sends to an individual consumer that is alleged to be without "prior consent" can expose the communicating company to potential liability under the TCPA. The TCPA provides a private right of action for violations and statutory damages in the amount of \$500 for each separate violation and up to \$1,500 for each "willful" violation (47 U.S.C. § 227 (b)(3), (f)(1)). This is for every single individual text or individual call. And, the recipient of a message does not have to show any actual injury. As a result, liability exposure in individual actions can be high and in a single class action lawsuit liability can quickly reach tens of millions of dollars or higher. The TCPA has become fertile ground for nuisance lawsuits because class action lawyers are

often rewarded with quick settlements, even in cases without any merit, simply because litigation uncertainty and the potential financial exposure resulting from a bad decision are too great a risk for a company to bear.

However, the major driving force behind the recent rise of TCPA lawsuits is the legal ambiguity surrounding how the language of the TCPA itself can be squared with today's telephone software and equipment. In 2003, the FCC noted that in enacting the TCPA Congress had not contemplated changing technologies that necessitated revisiting the TCPA after eleven years (Federal Communications Commission, 2003 TCPA Order). Given the rapid pace of technological change, it is little wonder that in 2013 many provisions of the TCPA and the FCC's implementing regulations are even more outdated. The effect of outdated TCPA statutory language and implementing regulations is apparent. In recent years, the filing of TCPA lawsuits has become a growth industry, as aggressive plaintiff's counsel take advantage of ambiguity caused by the regulatory lag in addressing change. The FCC must act quickly to stem this tide in frivolous litigation.

The first section of this article provides a brief overview of the TCPA. Section two highlights several recent lawsuits, many of them class actions, that exploit the language of the TCPA and the regulatory lag in updating its implementing regulations. Section three discusses a major focus of frivolous TCPA lawsuits, the meaning of the term "automatic telephone dialing system" (ATDS or autodialer), and posits that modern dialing technologies do not qualify as an autodialer under the TCPA if they do not have the current ability to store or produce telephone numbers by using a random or sequential number generator. Finally, section four urges the FCC to employ its regulatory authority to sensibly clarify the TCPA in the context of today's technology.

THE TELEPHONE CONSUMER PROTECTION ACT AND AUTOMATIC TELEPHONE DIALING SYSTEMS

The TCPA was passed in 1991 to "protect residential telephone subscribers' privacy rights to avoid receiving telephone solicitations to which they object." (47 U.S.C. § 227(c)(1)). Congress specifically sought to address telemarketing calls to homes that annoyed consumers or made them feel "frightened, threatened and harassed." (Federal Communications Commission, 2003 TCPA Order, p. 14017). And, Congress specifically sought to protect the public from disruptions to essential public safety services caused by random or sequential number generators that were jamming business private branch exchange systems (PBX) and flooding local exchanges. (A PBX is a private telephone network used within a company. Users share a designated number of outside lines for making calls external to the system.)

The TCPA contains a variety of prohibitions on outbound calls, including most calls using an autodialer to a wireless phone number. Under the TCPA, an autodialer is "equipment which has the capacity – (A) to store or produce telephone numbers to be called, using a random or sequential number generator; and (B) to dial such numbers (47 U.S.C. § 227(a)(1)). The TCPA prohibits all calls to wireless numbers made using an autodialer without obtaining prior express consent from the called party. (47 U.S.C. § 227(b)(1)(A)).

The FCC has issued various TCPA rulings over the last two decades, but has not yet tackled the fundamental question of how to define capacity. In 1992, the FCC required telemarketers to maintain do-not-call lists and limit calls to certain hours of the day (Federal Communications Commission, 1992 TCPA Order). Later, in cooperation with the Federal Trade Commission (FTC), the FCC instituted the national do-not-call registry (Federal Communications Commission, 2003 TCPA Order, p. 14017). In 2003, the FCC found that a predictive dialer, which assists

telemarketers in predicting when an agent will be available to take a call, could not be excluded from the definition of an ATDS “simply because it relies on a given set of numbers.” (Federal Communications Commission, 2003 TCPA Order, p. 14092). In that same order, the FCC found that although technologies such as short message service (SMS or text messages) were not yet in use when the TCPA was enacted, the FCC has asserted that such messages are “calls” under the TCPA (p. 14115).

While not the subject of this article, there are several reasons to question the FCC’s conclusion that text messages are “calls” under the TCPA. The TCPA was enacted well before the advent of text messages. While a “call” is not defined in the TCPA, the plain-meaning interpretation is an oral communication, not a written communication. Text messages do not present the same underlying concerns that prompted Congress to enact the TCPA, such as tying up phone lines (Senate Report No. 102-178, 1991, p. 2), or calls that were the basis of numerous consumer complaints. As described by Senator Hollings, “This bill is purely targeted at those calls that are the source of the tremendous amount of consumer complaints at the FCC and at the State commissions around the country – the telemarketing calls placed to the home.” (Congressional Record, 1991). Senator Hollings described such calls as the “scourge of modern society. They wake us up in the morning; they interrupt our dinner at night; they force the sick and elderly out of bed; they hound us until we want to rip the telephone right out of the wall.”

In 2008, the FCC clarified that autodialed prerecorded message calls to wireless numbers that are provided to a creditor in connection with an existing debt are calls made with “prior express consent” of the called party (Federal Communications Commission, ACA Declaratory Ruling, 2008). More recently, in February 2012, the FCC revised its rules to define prior express consent as requiring “written

consent” to make an autodialed or prerecorded telemarketing call to a wireless number (Federal Communications Commission, 2012 TCPA Order). In 2012, the FCC also issued a declaratory ruling that clarified that single-confirmatory text messages sent in response to a consumer’s opt-out request do not violate the TCPA (Federal Communications Commission, SoundBite Declaratory Ruling, 2012). And, in May 2013, the FCC issued a declaratory ruling that sellers may be held vicariously liable under principles of agency for some violations of the TCPA committed by seller’s contractors (Federal Communications Commission, 2013, DISH Network Declaratory Ruling). A number of states have also adopted their own restrictions that are similar to and sometimes more restrictive than the TCPA (Federal Communications Commission, 2003 TCPA Order, pp. 14024-25).

As described in more detail below, given the multiplying number of TCPA lawsuits that are choking the judicial system, the FCC must publicly recognize that dialing technologies without the current ability to dial or produce numbers in a random or sequential fashion cannot be the basis of TCPA liability. The FCC must act quickly to ensure that companies using equipment that not only does not, but cannot send messages in the manner prohibited by the TCPA are no longer subjected to frivolous lawsuits.

OVERVIEW OF TCPA LAWSUITS

The cases addressed here demonstrate, as some judges have candidly opined, that application of the TCPA without considering common sense or current technology can lead to results that could not have been intended by the statute (Ryabyshchuk v. Citibank, 2012).

In *Mais v. Gulf Coast Collection Bureau* (2013), a federal district court in Florida, in examining the meaning of “consent” under the TCPA, rejected the FCC’s declaration that providing a cell phone number

for contact purposes constitutes “prior express consent” (Federal Communications Commission, 2008, ACA Declaratory Ruling, n. 13). In this case, a patient included a cell phone number in his admissions paperwork for a hospital emergency room, and in the related “Notice of Privacy Practices” form, agreed that the patient’s healthcare information may be released “to bill and collect payment.” When the patient did not pay his bill, a debt collection agency contacted the phone number given to the hospital in an attempt to collect the debt. Despite the language in the Privacy Notice, the court found that the patient had “not directly, clearly and unmistakably stated that the creditor may call him,” and so “he has not given ‘express consent.’”

In *Nelson v. Santandar Consumer USA Inc.* (2013), the court determined that whether the defendant in fact even made automated calls was irrelevant, awarding an individual plaintiff \$571,000 for telephone calls to plaintiff’s cellular phone related to attempts to collect a debt. The defendant argued, in part, that it had made calls through “preview dialing,” in which an employee chooses which numbers to dial, rather than an automated system. The court nonetheless found there was TCPA liability. The court stated that “*how* the defendant made a particular call” was not the deciding factor (even if the call was not automated), but rather, and only, “whether the system it used had the ‘capacity’ to make automated calls (*Nelson v. Santandar Consumer USA Inc.*, 2013, p. 8).

The *Nelson* court relied on a Ninth Circuit Court of Appeals opinion, *Satterfield v. Simon & Schuster, Inc.* (2009), which had held that “a system need not *actually* store, produce, or call randomly or sequentially generated numbers, it need only to have the capacity to do it” to be considered an ATDS. (In *Satterfield*, the class representative plaintiff alleged that Simon and Schuster had sent text advertisements for a newly released novel in violation of the TCPA,

after the plaintiff signed up for free ringtones that required consent to receive promotions from affiliates.) The district court found that because the equipment at issue did not store, produce or call randomly or sequentially generated telephone numbers, it did not constitute ATDS, and therefore TCPA liability did not apply (*Satterfield v. Simon & Schuster, Inc.*, 2007). In overturning the district court, the appellate court emphasized that the “focus must be on whether the equipment has the *capacity*” to store or produce numbers to be called using a random or sequential number generator, not on whether the equipment actually does so (*Satterfield v. Simon & Schuster, Inc.*, 2009). Interestingly, the court found that there was a genuine issue of material fact concerning whether the equipment had the actual requisite capacity. The appellate court remanded the issue to the district court. Before the district court entered rulings on the capacity question, the case settled for \$10 million (*Satterfield v. Simon & Schuster, Inc.*, Settlement Agreement and Final Judgment and Order of Dismissal, 2010).

After *Satterfield*, it was clear that it would no longer be a sufficient defense in TCPA litigation to argue that a system did not actually store, produce or call randomly or sequentially generated telephone numbers. Instead, TCPA defendants have had to argue that their systems lack the actual ability to do so in order to demonstrate that their systems do not qualify as an ATDS. Nevertheless, TCPA defendants in many instances have now also found themselves subject to expensive and lengthy discovery in order to demonstrate that their systems would need to be altered in order to have the ability in the future to store, produce or call randomly or sequentially generated telephone numbers. This clearly goes beyond the statutory language and introduces the current absurdity surrounding much TCPA litigation.

In *Griffith v. Consumer Portfolio Serv.* (2011), the court decided that even if equipment *does not even*

have the ability to store, dial, or generate random or sequential numbers, it is still an ATDS, that can subject the calling party to TCPA liability as long as it is in the category of a “predictive dialer.” In coming to this conclusion, the court relied on the FCC’s 2003 TCPA Order which found that predictive dialers could not be excluded from the definition of ATDS (Federal Communications Commission, 2003 TCPA Order, pp. 14092-93). The *Griffith* court interpreted the FCC’s order to mean that all predictive dialers are ATDS, instead of interpreting the order to mean that a predictive dialer can be an ATDS. As a result, the *Griffith* court found that whether the equipment in question had the “capacity” under the TCPA to store, dial or generate random or sequential numbers was irrelevant as long as the equipment was a “predictive dialer.” Interestingly, in a footnote, the ruling states that to the extent the *Satterfield* could be read to lead to a different result, the court rejects it because *Satterfield* did not analyze or even cite the relevant provisions of the FCC’s 2003 and 2008 orders (*Griffith v. Consumer Portfolio Serv.*, 2011, n. 3)

This set of cases illustrates why TCPA litigation is an endless opportunity for wasteful litigation: Providing a phone number for the express purpose of being contacted in connection with a bill is not sufficient “express consent” to be called under the TCPA. A company can still be liable under the TCPA for using an autodialer, even if the call was not automated but instead made manually. A company does not actually have to make calls using a random or sequential number generator in order to be liable. And, as it turns out, the equipment need not even have the capacity to store numbers or make calls in this way, as long as the equipment is labeled a “predictive dialer.”

By contrast, some courts have recognized that the purpose of the statute and context are important considerations when evaluating the applicability of the TCPA. For example, a federal court in California held

that where a plaintiff had initiated contact and provided his cellular number to Taco Bell, that Taco Bell’s subsequent texts to plaintiff, including a single, confirmatory text in response to an opt-out request, did not violate the TCPA (*Ibey v. Taco Bell Corp.*, 2012). The court reasoned that “[t]o impose liability under the TCPA for a single, confirmatory text message would contravene public policy and the spirit of the statute.” (The *Ibey* court sits in the Ninth Circuit and noted, pursuant to *Satterfield*, that a text message is a “call” under the TCPA and that an ATDS is equipment that has the capacity to store or produce telephone numbers to be called using a random or sequential number generator.) In another case involving similar facts, the court held it is incumbent upon the courts to approach questions of TCPA violations with “a measure of common sense” and that “context is indisputably relevant to determining whether a particular call is actionable under the TCPA” (*Ryabyshchuk v. Citibank*, 2012).

Companies should not face liability based on the luck of the draw of a particular court or judge. Instead, the FCC should act decisively to clarify the meaning of key TCPA provisions, particularly in the context of modern technology used for communications today.

AUTODIALER PROVISION MUST BE UPDATED TO ACCOUNT FOR TODAY’S TECHNOLOGY

The cases above highlight that in the absence of clear guidance, some judges have applied “common sense” and “spirit of the statute” rationales, while at least one judge candidly opined that application of the TCPA to a widespread practice would produce an “impermissibly absurd and unforeseen result.” However, other judges have done just the opposite by impermissibly overstressing the boundaries of the TCPA as described above, leading to absurd results.

Opportunistic plaintiff attorneys have exploited TCPA ambiguity and will continue to do so absent FCC intervention. One open opportunity for the FCC to

step in is to clarify the meaning of a “capacity” as it relates to an automatic telephone dialing system, the meaning of which is at the core of much TCPA litigation.

As explained above, Congress defined an autodialer as “equipment which has the *capacity* – (A) to store or produce telephone numbers to be called, using a random or sequential number generator; and (B) to dial such numbers” (47 U.S.C. § 227(a)(1)). The TCPA prohibits calls to wireless numbers using an autodialer without obtaining prior express consent from the called party (47 U.S.C. § 227(b)(1)(A)).

Whether or not equipment has the “capacity” to be an autodialer has been one of the most contentious issues under the TCPA. It is estimated that within the past five years the number of class action cases involving the meaning of “capacity” has risen by nearly 700% (Portfolio Associates Comments, 2012). In these cases, appropriately identifying equipment as an “autodialer” is critical for liability determinations (47 U.S.C. § 227 (b)(1)(A)(i)-(iii)). As discussed above, some courts have interpreted this definition to mean that it does not matter whether or not equipment *actually* stores or produces numbers, whether or not calls are made to numbers *randomly or sequentially*, or even if the equipment in question *actually even has the ability* to generate and dial random or sequential numbers. The Commission has contributed to this tortured reading by stating “any equipment that has the specified capacity to generate numbers and dial them without human intervention *regardless of whether the numbers called are randomly or sequentially generated* or come from calling lists” is an autodialer (Federal Communications Commission, SoundBite Declaratory Ruling, 2012, n.5).

Unfortunately, neither Congress nor the FCC has defined “capacity,” leaving a gaping hole that has grown larger and larger as technology has advanced and even basic systems have become more sophisticated. Despite not defining the term capacity,

the FCC has rightfully recognized that capacity must be evaluated in the context of hardware as it is programmed with software (Federal Communications Commission, 2003 TCPA Order, p. 14091). In other words, if software is added to hardware that enables a system to meet the definition of an autodialer then that system has the requisite capacity to be an autodialer under the TCPA. If that is the case, the opposite must then be true: if a system is not programmed with the software that enables it to be an autodialer, then it cannot have the capacity to be an autodialer. This idea is consistent with the FCC’s determination that the purpose of evaluating capacity when making autodialer determinations is to ensure that the prohibition on autodialed calls is not circumvented (p. 14093).

While these acknowledgements make complete sense, they have proven insufficient in providing judges with the guidance they need to determine what capacity means in the first place. As a result, in the absence of a statutory or regulatory definition of capacity or any other clear guidance from the FCC to limit the scope of capacity, judges have been forced to give meaning to this ambiguous term. Companies are currently facing significant risk based on messaging equipment that does not even have the capability to send random or sequential messages, but instead would require hardware or software changes to create that capability.

This has presented enormous obstacles to mobile advertisers because nearly all computers, including smartphones, can be altered or programmed to have the capacity to store and generate random or sequential numbers. Yet some courts have allowed litigation to progress despite any current ability to dial random or sequentially generated numbers.

So the question is how should ATDS be interpreted so that consumers are in fact protected from the privacy intrusions and public emergency concerns that Congress was worried about while at

the same time ensuring companies can properly call mobile numbers without fear of TCPA liability? Put simply, the FCC must adopt boundaries on what constitutes capacity under the TCPA by clarifying it refers solely to a system's "current" capacity at the time a call is made. This definition is consistent with the plain language of the statute, Congressional intent, common sense, good public policy, and the FCC's stated view of capacity.

Clarifying capacity as current ability has received much support in the TCPA docket at the FCC. As several parties have vigorously argued in formal FCC filings, a current, actual capacity reading makes sense because with today's technology nearly any computer, including the ubiquitous smartphone, could be altered at some point in the future to become an ATDS (YouMail Petition, 2013). Clearly, however, Congress could not have intended to attach potential TCPA liability to every smartphone used to dial a wireless number in the absence of prior express consent. To help ensure that courts are appropriately evaluating TCPA liability, the FCC should clarify that ATDS should refer only to equipment that at the time a call is placed has the actual ability to store and generate random or sequential numbers.

This approach is also consistent with the FCC's limited stance on capacity. If a system in its current form contains hardware paired with software that allows it to store and generate random or sequential numbers, then it will still be considered to have the requisite capacity under the current ability clarification. Only if a system does not have actual capability in its current form will it be excluded from the definition of an ATDS.

Such a reading also aligns with the FCC's acknowledged purpose of why a capacity evaluation is important in the first place: if a system lacks any current ability to store or generate random or sequential numbers then there is no way that system could circumvent the prohibition on autodialers. Thus,

under a "current ability" interpretation, a system that lacks the ability to store and autodial random or sequential numbers without human interaction cannot be considered an autodialer unless and until some affirmative action is taken to create such capacity.

Also, applying general principles of statutory construction, there are several aspects of the ATDS definition that support a reading of current ability:

First, a plain language reading of the statute yields a present capability interpretation (i.e., an ATDS is equipment that has the ability to store or produce randomly or sequentially generated telephone numbers to be called and the ability to dial randomly or sequentially generated telephone numbers). Nothing in this implicates future or theoretical alterations.

Second, Congress used the present tense, "has the capacity," when defining ATDS. There is no reason to read anything more into this clear choice of present verb tense. The language does not, for example, say "could have the capacity" or the "theoretical capacity."

Third, a capacity reading that focuses on current, actual ability ensures that all the words in the definition of ATDS are given effect as required by the rules of statutory interpretation. The definition of ATDS states "equipment which has the capacity – (A) to store or produce telephone numbers *to be called*" The only reading that gives this phrase effect is that Congress intended the definition of ATDS to apply to equipment that actually has the capacity to be an ATDS in current form (to store or produce telephone numbers *to be called*) instead of the theoretical capacity to become an ATDS at some point in the future (to store or produce telephone numbers *that could be called*). Under basic principles of statutory construction, it would be impermissible to ignore the "to be called" phrase altogether.

Interpreting capacity as current ability also has support in legislative history. The reason Congress

specifically targeted autodialers was to protect the public from being bombarded by unsolicited computerized telemarketing which was believed to be particularly annoying and to shield essential public safety services from being disrupted by lines being tied up by sequential automated calls (Senate Report No. 102-178, 8 October 1991, pp. 4-5). By limiting the scope of capacity to current, actual ability, none of the concerns raised by Congress will be threatened. Equipment that has the current ability to store or produce telephone numbers *to be called* ... will still be prohibited from calling wireless numbers outside of obtaining express consent or in an emergency. Finally, clarifying capacity as current ability will also create additional public policy benefits. Consumers will have access to informational messages that the FCC has acknowledged are “highly desirable” (Federal Communications Commission, 2012 TCPA Order, p. 1841). Businesses will benefit from increased regulatory certainty and a substantially reduced risk of frivolous lawsuits. And judges will be able to dismiss many TCPA cases outright, avoiding the need for expensive and lengthy discovery.

FCC ACTION IS REQUIRED TO MODERNIZE THE TCPA

The FCC has broad authority to interpret the TCPA and clarify its own rules without an act of Congress, and the agency has shown a willingness to act quickly when properly presented with an urgent matter (Charvat v. Echostar Satellite, 2010, 466-467; Federal Communications Commission, Soundbite Declaratory Ruling, 2012, p. 15394).

In November 2012, the FCC issued a Declaratory Ruling that demonstrates the importance of modernizing the TCPA (Federal Communications Commission, SoundBite Declaratory Ruling, 2012, p. 15392). In that ruling, the agency affirmed that a one-time text message sent to confirm a consumer’s request to opt-out of receiving future messages does not violate the TCPA so long as the message conforms

to certain requirements (p. 15391). At the time, many class action lawsuits had been filed or threatened alleging that an individual’s prior express consent to receive text messages from a company ends at the point the person sends an opt-out request to the sender and that any message sent thereafter confirming receipt of the opt-out request is sent without consent in violation of the TCPA. Under this argument, a company choosing to send a one-time message confirming that a request not to receive any further messages has been received and will be honored, as required by industry best practices, would actually subject themselves to millions of dollars of potential liability.

Fortunately, the FCC quickly recognized the need to take action, and issued a ruling less than nine months after the Petition for Declaratory Ruling was filed (SoundBite Petition, 2012). The Commission held that a consumer’s original prior express consent to receive text messages from a sender includes consent to receive a final, one-time text message that confirms that the opt-out request was received (SoundBite Declaratory Ruling, 2012, p. 15394). The Commission found that these messages are consistent with consumer expectations, noting that a review of consumer complaints from July 2011 to July 2012 did not uncover any complaints about receiving a confirmatory text message, but did uncover complaints from consumers about not receiving these messages (p. 15395). In a statement accompanying the ruling, Commissioner Ajit Pai referred to this decision as “common-sense” and voiced hope that the ruling would “end the litigation that has punished some companies for doing the right thing, as well as the threat of litigation that has deterred others from adopting sound marketing practice” (p. 15401).

There are numerous vehicles available to the FCC to resolve the question of capacity and the definition of autodialer. Currently pending before the FCC are two unresolved public notices that sought comment

on separate petitions filed by GroupMe and Communications Innovators. GroupMe specifically asks the FCC to clarify the meaning of the terms “automatic telephone dialing system” and “capacity,” and argues that the definition of autodialer should exclude technologies with only theoretical capacity (and not actual capacity) to dial random or sequential numbers (Federal Communications Commission, GroupMe Public Notice, 2012). Communication Innovators similarly requests that the FCC clarify through a declaratory ruling that predictive dialers that are not used for telemarketing purposes and do not have the current ability to generate and dial random or sequential numbers are not “automatic telephone dialing systems” (Federal Communications Commission, Communication Innovators Public Notice, 2012).

The Professional Association for Customer Engagements’ (“PACE”) recent Petition for Reconsideration and YouMail’s Petition for Expedited Declaratory Ruling also both provide opportunities for the FCC to resolve these questions. In its Petition regarding the 2012 TCPA Order, PACE requests, among other things, that the FCC clarify that a predictive dialer only constitutes an autodialer if it has the capacity to store or produce telephone numbers to be called using a “random or sequential number generator” (PACE Petition for Reconsideration, 2012). The association also asks the FCC to define the term “random or sequential number generator” (p. 4). Similarly, in its recent Petition, YouMail urges the FCC to declare that its software, which enables the sending of an optional text message confirming receipt of a caller’s voicemail, is not an autodialer because it lacks current capacity to “store or produce numbers to be called using a random or sequential number generation (YouMail Petition, 2012, pp. 9-11). The company prophetically explains that “without some guidance, the evolution of the definition of the term ATDS is limited only by class counsel’s imagination, or

worse yet, will come to encompass every type of telephonic device in existence, thereby preventing anyone from calling a cellular phone number without express consent or except in an emergency” (p. 11).

Taking into account how equipment actually works is consistent with the FCC’s recognition in 2008 that “current industry practice and technology” is a factor when determining how to apply TCPA restrictions (Federal Communications Commission, ACA Declaratory Ruling, 2008, p. 566). As reflected in the FCC record submitted since that time, the capacity of today’s dialing technology has changed and does not universally have the ability to “store or produce telephone numbers to be called, using a random or sequential number generator [and] to dial such numbers.” The FCC should evaluate the meaning of capacity in the context of current technology and clarify that equipment is not ATDS unless it has the current ability to “store or produce telephone numbers to be called, using a random or sequential number generator [and] to dial such numbers.”

CONCLUSION

The FCC should take decisive action to clarify that “capacity” in the context of evaluating the definition of an ATDS under the TCPA means “current ability.” This clarification will make a significant dent in the overwhelming increase in frivolous TCPA lawsuits and will help ensure that consumers receive the kind of communications they want and expect, businesses are able to act confidently and without fear of being subject to wasteful litigation, and judges are able to quickly dismiss cases that clearly fall outside the scope of the TCPA.

Acknowledgement: Special thanks to Yosef Getachew for his assistance with this article.

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2013: THE BREAKOUT YEAR FOR MOBILE MEASUREMENT

What Every Marketer Needs to Know About Push Notifications, SMS and Mobile Email Messaging in 2013

Brendan O’Kane

Abstract:

As consumers adopt smartphones and tablets at soaring rates, marketers are racing to make sense of the copious data those transactions generate, harness what the data says about their customers, and then act on that information. This paper addresses the issue of whether there is a need for analytics and data aggregation for mobile messaging campaigns. It describes the results of a case study performed on one of Australia’s most comprehensive parenting websites and provides insights and analysis of the strategies and techniques used, such as action analytics, a/b split testing and retargeting. The paper draws the conclusion that using analytics to target precise messaging will substantially increase consumer engagement and increase ROI.

Keywords: mobile analytics, mobile marketing, A/B split message testing, targeting, analytics, multi-channel delivery, retargeting, messaging analytics

WELCOME TO THE AGE OF MOBILE MEASUREMENT

Companies have been measuring customer response to direct marketing messages since long before the Internet. However, the intelligence gathered back then is not even a microscopic fraction of the volume of consumer data being gathered now through mobile devices (Lynch, 2012).

As consumers adopt smartphones and tablets at soaring rates, they make more of their everyday social and financial transactions on those devices. Marketers are racing to make sense of the copious data those transactions generate, harness what the data says about their customers, and then act on that information (Olenski, 2012).

Marketers delivering messages to consumers through non-mobile channels have a wealth of long-established choices, industry-wide best practices and measurement standards arrived at over decades. Until very recently though, marketers who target mobile

customers have had limited options for gauging message impact and, when necessary, reworking messages that do not deliver ROI.

That, however, is changing.

In late 2011 and early 2012, many marketing pundits (Meers, 2012) were declaring 2012 to be “The Year of Mobile Marketing” (Rice-Lincoln, 2011). Now, as ever-growing numbers of marketers are “going mobile” and realizing that this medium requires its very own analytics techniques and metrics, 2013 appears poised to become “The Breakout Year for Mobile Measurement.”

Acquisition is Expensive: Beating the Numbers

By the end of 2012, the world’s marketers will have spent \$11.6 billion on mobile campaigns, an 85% increase from 2011. By 2015, marketers are expected to be spending a yearly \$4.4 billion on mobile campaigns in the United States alone (Schonfeld, 2011). When it comes to marketing through mobile,

engaging and retaining existing customers, rather than attracting new ones, is a far more cost effective route to boosting ROI.

In their 2002 business management manual "Leading on the Edge of Chaos," authors Emmet C. Murphy and Mark A. Murphy (2002) estimated that acquiring new customers can cost up to five times more than retaining existing customers, simply by keeping them satisfied. The Murphys also estimated that in some industries reducing rates of current customer loss by just 5% could boost profitability by 25 to 125%.

About a year later, Harvard Business Review writers Ravi Dhar and Rashi Glazer wrote in their article "Hedging Customers" that, according to some estimates, repeat purchases by established customers take up to 90% less marketing effort than first purchases by new customers (Dhar & Glazer, 2003.) In fact, for many marketers acquisition costs have gone "through the roof," as Andrew Green, head of business development at game developer TinyCo, told "All Things Digital" in October 2012 (Duryee, 2012).

Marketers already know they need to go mobile; that is no longer even a question. While it may be a challenge, pinpointing the right moment and the right message to elicit a customer conversion is possible. It is all in the numbers, as long as marketers can identify the smart data within the Big Data.

All Eyes on Mobile Messaging: The Surest Way to Engage and Retain Consumers

Mobile is not only the here and now, it is also tomorrow's Internet access winner, with mobile data plans reaching 1.2 billion as of May 2012 (mobiThinking, 2012) and growing to 9.3 billion by 2018 (Ericsson, 2012). Mobile will soon be in nearly everyone's hands as it surpasses desktop as the principal gateway to the Internet for a large majority of consumers.

Considering these numbers, it makes perfect sense for marketers to engage consumers through the

portable screens that command so much of their attention and increasingly dominate their daily lives. In fact, mobile has become so prevalent and so indispensable that many users experience heightened stress when separated from their devices (Lindstrom, 2011), while 68% of mobile owners sleep with or next to them (Sutter, 2012). No other medium has penetrated and impacted daily life to this extent. As mobile communications hardware and software have evolved, so have the routes by which marketing messages directly reach device owners.

Today, brands seeking to raise their mobile profiles are distributing direct marketing messages to customers' smartphones and tablets in three main formats:

- **SMS:** This is the globally popular text message service. Marketers large and small have leveraged its immediacy to increase engagement and ROI. For example, Planet Hollywood Resort and Casino in Las Vegas, in a bid to increase membership in its A-List Players Club reward program, developed a dual opt-in strategy: mobile-carrying guests first received offers to sign up for prize giveaways and then received offers of free slot games for new rewards sign-ups (MobileStorm, 2010). During a small-scale pilot test campaign, Planet Hollywood achieved a 13.5% rate of reward program opt-in, with half of those guests playing beyond the original free games. Revenues generated covered the cost of the pilot program within 28 days.

- **Mobile Email:** During the period between the Tuesday before Thanksgiving and Cyber Monday 2012, according to direct marketing firm Knotice, the open rate for mobile email messages from retailers jumped 50% (Tode, 2012). This is a clear indication that marketing via mobile email is still going strong as mobile adoption, and email opens on those devices, soars (Business.com, 2013). Seamless, an online platform that allows two million-plus members to order food from more than 11,000 restaurants in 40

cities, recently saw a 100% higher click-through rate, 50% more app downloads and 90% more food orders from those downloads (MarketingSherpa.com, 2012). How? Through mobile email targeted by device type as opposed to untargeted email.

- **Push Notifications:** These are the opt-in messages that pop up on smartphones and tablets announcing updates and offers related to apps that consumers have installed on their devices. Push notifications, when done right, have tremendous potential for boosting customer engagement. For example, when Florida-based Jenkins Auto Group wanted technology to help it better connect with customers, it enlisted the help of MobileAppLoader to create apps and push campaigns for all its regional dealerships. According to the company's Internet director, the push campaign has significantly increased follow-up phone calls and service appointments as well as car and parts sales (Littman, 2012). It has also increased customers' engagement with Jenkins' mobile apps, which allow users to schedule appointments as well as find the lowest local gas prices and share their activity with social networks.

Large volumes of untargeted push, SMS, and mobile email messages do not necessarily yield the best value, though. That is because mobile is different from desktop-based marketing. Page views, number of registered users, impressions, banner clicks and message open rates do not tell the marketer who is interacting or which app features the user is interacting with. Nor do they reveal which specific messages are driving engagement and ROI.

It is also because consumers do not use desktop and mobile in the same way, particularly when they are searching to shop; 90% of desktop searchers act within one day and 70% of mobile searchers act within one hour. In addition, mobile devices help their owners manage everything from finances to social lives to blood sugar. Consequently, device owners expect mobile messaging to add value to their lives.

The tolerance threshold for untimely and irrelevant messages is much lower on mobile than on desktop, where messages are easier to ignore. In fact, message overload and irrelevance cause 69% and 60% of consumers, respectively, to abandon mobile marketing updates (MarketingCharts, 2012).

Marketers increasingly know that to build engagement, loyalty and ROI on mobile they will need metrics that paint a clear picture of each customer and allow them to constantly test message effectiveness and quickly retool messages that aren't working.

They need smart analytics. Nimble analytics. Action analytics.

MOBILE MEASUREMENT DONE RIGHT: ACTION ANALYTICS, A/B SPLIT TESTING AND RETARGETING

In 2011, the Interactive Advertising Bureau's Mobile Marketing Center of Excellence released a study, "The State of Mobile Measurement" (Internet Advertising Bureau, 2011). The IAB reported that, while the number of mobile marketing campaigns is booming, the measurement of those campaigns' effectiveness is lagging behind and consistent industry-wide standards have yet to be adopted. But even at this stage, the mobile industry does have precision measurement tools that can help marketers use smart data to take the pulse of their audiences and craft messaging campaigns that resonate with individual customers, yielding optimal ROI.

In order to get top relevance and value out of each message, marketers can turn to methods that show exactly how customers are interacting with those messages down to individual taps and swipes.

- **Action Analytics:** Harnesses deep and granular data such as send versus open, time since last open, organic versus prompted opens, location, and links individual message copy to specific user behaviors, outcomes and goals. The gathered business intelligence can then be used to set parameters for precise retargeting and future messaging campaigns.

For example, there is no point in messaging users at times when they are not active on mobile.

- **A/B Split Testing:** This analytics method consists of deploying different versions of a single message to see which gets the highest number of the marketer's desired conversions, be they in-app purchases, coupon clicks and redemptions or social shares. Marketers can test message copy for qualities such as tone, urgency, length and energy. This method has been in use for decades to test marketing messages in print, on television and on the Web, and it is starting to make its mark on mobile. Combined with automatic selection of the best performing split, and derived from an audience subset, A/B split testing can yield dramatic conversion increases.

- **Retargeting:** The data generated through action analytics and A/B split testing can be used to retarget unresponsive consumers. In retargeting, marketers can use the data to further retool messages and deploy them to customers who did not open a previous message or to those who did open the message but did not follow the call to action. For example, an actionable A/B split message test with retargeting looks something like this:

A well-known national cosmetics and perfume retailer with a mobile app wants to remind its reward-program members that their accrued points are about to expire. The retailer deploys two versions of the same message to their app users who have not redeemed their points:

Message A: "LAST CHANCE to score great deals with your Beauty Insider rewards gift card!"

Message A had a 40% open rate and a 20% redemption rate. For every 100,000 messages sent, 8,000 led to a conversion.

Message B: "LAST WEEK to redeem your Beauty Insider rewards gift card!"

Message B had 30% open rate and a 30% Redemption rate. For every 100,000 messages sent, 9,000 led to a conversion.

Though it had a lower open rate, message B yields better ROI because it had a higher redemption (9% versus 8%). So the retailer disseminates that message to a wider audience.

Then, to maximize ROI even further, the retailer retargets customers with an additional message, taking a segmented approach based on the original test. There are, in fact, six possible outcomes in our sample A/B test:

Message A	Message B
Opened / Redemption	Opened / Redemption
Opened / No Redemption	Opened / No Redemption
Not opened	Not opened

Using this matrix, our marketer could take any number of retargeting approaches. As an example, she might retarget:

1. Everyone who opened messages A and B and took the redemption could receive a new message offering triple points for taking an additional action (e.g., a survey, a social share, etc.).
2. Everyone who opened message A but did not redeem is sent the winning split test message.
3. Everyone who opened message B but did not redeem is sent a more enticing message, perhaps offering bonus points.
4. Everyone who did not open either message A or B is sent a message with a more urgent call to action.

By retargeting unresponsive customers after an A/B test, marketers can make sure they have taken every possible opportunity to engage the customer and elicit a conversion. When marketers know their customers and give them what they want, they build stronger and longer-lasting relationships with them, as one successful Australian company found out.

A CASE STUDY: A/B SPLIT TESTING IN ACTION WITH KIDSPOT

Melbourne-based Kidspot.com.au, founded in 2005, was created with the purpose of giving Australia's moms a central repository of reliable information that could make the journey of pregnancy and child rearing easier and more enjoyable. The site has since been acquired by News Corporation and grown to include detailed and comprehensive directories on every stage of pregnancy and birth as well as on parenting throughout all of the child's developmental stages. Some of the site's features include a wide variety of social discussion forums, a blog and activities for children such as easy recipes, games, crafts and printable coloring pages.

Kidspot is now the most popular parenting lifestyle site in Australia, with more than 1.3 million unique monthly visitors and more than 68,000 Facebook "likes." As a natural response to the rapid adoption of smartphones and tablets by the mom demographic, Kidspot developed and released the BumpWatch mobile app. BumpWatch helps women hoping to conceive pinpoint their most fertile times of the month, offering them advice on how to increase their chances of becoming pregnant. It also helps expectant moms keep track of milestones along the pregnancy journey from conception to birth. At launch, the BumpWatch app deployed push notifications messages as a way to interact with users, addressing the process of pregnancy in a "folksy" tone with fairly casual language, including references to "baby bumps" and inquiries as to how "junior" was doing. While reception to the app, and to the push notifications meant to keep moms engaged, was positive, the company was sure that engagement could be stronger.

The Objective

Kidspot's main communications objective was to increase user engagement with the BumpWatch app with the expectation that women who downloaded it

would follow the push notifications' prompts more often and spend more time within the app. Longer app engagement also increases monetization opportunities, in this case the likelihood that the user will click on an invitation from a brand partner such as Huggies to visit its website and join its Mums to Be Club. The company wanted to craft messaging that spoke directly to each user according to her individual point along the pregnancy journey, realizing that, just as a woman in her third trimester would not fit into the jeans of a woman in her first trimester, the same principle applies to mobile messaging.

As there is no "one size that fits all" approach and as more and more consumers adopt mobile, the need to tailor mobile messages by ever more specialized segments grows. Kidspot wanted to identify exactly what kind of language would best pique the interest of women in these different segments: those trying to conceive and of expectant mothers in each week of the nine-month pregnancy process.

The company wanted to measure:

- How many app users were opening the push messages?
- Which opened messages were leading to increased app exploration?
- Which users clicked through to brand partners?
- Which messages led users to access the "settings" section of the app?

The Strategy

In order to improve engagement with BumpWatch, Kidspot enlisted the help of OtherLevels. OtherLevels helps brands and publishers using push notification, SMS and mobile email messaging engage, retain and maximize the value of their audiences through mobile messaging analytics and retargeting. After analyzing the app's content and the push notifications Kidspot was sending, OtherLevels recommended that the best way to measure the effectiveness of each push would be to run A/B split

testing. A/B split testing refers to deploying at least two versions of a single message to see which iteration delivers the highest value and ROI. The technique has been used in print, television and Web campaigns for decades and is starting to make inroads on mobile. OtherLevels determined this to be the best course of action as mobile needs different analytics beyond those used with Kidspot's desktop-based Web site (e.g., page views, banner clicks, impressions) to deliver better engagement.

The Execution

The BumpWatch app has two separate sections: a fertility tracker that calculates probable ovulation dates and provides conception tips, and a pregnancy tracker that calculates due date and offers information on every stage of the pregnancy.

Beginning in 2011, OtherLevels and Kidspot created several versions of the push notification messages for the fertility and pregnancy trackers. Each message varied in several areas, including tonality, call-to-action and word count. The messages were sent to women from the pre-conception stage through to pregnancy development in all three trimesters.

For example, segments of women trying to get pregnant received one of these three messages:

- A. "It's almost your fertile time - happy baby making! Visit BumpWatch to learn more."
- B. "Your body is preparing to become pregnant. It's time to get busy baby-making!"
- C. "It's almost your fertile time - read our 10 tips to boost your fertility."

With a lift rate of 198%, message A was the most widely successful notification of the three.

For those who were already pregnant, the company deployed test messages to women in later stages of pregnancy (week 28):

- A. "Some important milestones for baby's brain this week. What else has changed? Let's find out!"

- B. "Your baby can still do somersaults but it's getting cramped in your belly, so he's starting to move into the birth position. Find out more."

Here, message A won the engagement contest, producing higher numbers on every metric. This message achieved a 230% lift rate as well as a greater percentage of users maneuvering through the navigation screen of the app at 200% lift.

For women in their 30th week of pregnancy, OtherLevels delivered these two message choices:

- A. "From this week, your baby's fine lanugo hair may begin to disappear. Why? Let's find out?"
- B. "Week 30 Congratulations! You're in your third trimester. Baby is now laying down body fat and growing hair and nails. Lovely! Find out more."

With one of the highest percentages, message A not only had a 308% lift but also a 125% navigation page lift as well.

Based on the results of these tests, Kidspot noticed that shorter and less casually worded messages returned the highest results. The tests also revealed that messages ending in the words "Let's find out!" proved to be most compelling for moms to open the message and engage with the app across the board. Utilizing these results, messages following this model were deployed to wider audience segments.

The Results

After the first round of A/B split tests carried out by OtherLevels over a two week period, Kidspot was able to identify with precision the kind of messages - less folksy, more clinical and concise - that makes moms curious to know more and keeps them engaging with the BumpWatch app for longer.

According to initial results, user engagement with the BumpWatch app increased by 87.5%, while a lift of between 200% and 300% was achieved based on the

wider deployment of segmented messages shown to draw more interest from moms.

These numbers make it clear that, even with consumers as busy as moms-to-be, when it comes to winning the engagement game in an increasingly untethered, wireless age, mobile analytics can put a marketer ahead of the pack.

WHAT TO EXPECT IN 2013

What was missing in 2012 was not mobile adoption or mobile devices or even mobile analytics in general, it was the tools to gather deep granular data that allows marketers to measure engagement and act quickly to alter messaging that doesn't work.

And embracing mobile's differences? That mobile is not email or web banner advertising for a smaller screen is becoming increasingly obvious to marketers, many of whom have recognized they can not apply the same old web metrics to mobile and get the same results. The channels differ, the experience is different, and so is the engagement.

Marketers should consider 2013 as the "Year of Mobile Measurement." Mobile analytics and measurement is going to make great strides in the year ahead, becoming an indispensable component of any mobile engagement campaign. Here are five of our predictions of what the mobile marketing and measurement landscape will look like in the year ahead:

1. **SMS will remain highly relevant:** Anyone who has received a text reading 786-454-5736 WE BUY JUNK CARS CASH \$300/400 COMPRAMOS CARROS might disagree, but SMS will live on despite newer and arguably more visually engaging formats precisely because of its simplicity and directness. Read our message. Text 1 to opt in, text 2 to opt out. Simple. While push notifications will gain in prominence, look for SMS to remain highly relevant in 2013 in both the developed and developing world where feature phones outnumber smartphones. With

messaging being very limited, marketers will learn to make every character count.

2. **Marketers will demand the same sophistication from mobile as they do from other marketing channels:** Current mobile analytics are not meeting the needs or challenges of marketers to engage or retain their mobile audiences and show ROI. But now that the conversation has moved from whether to go mobile to how, marketers will demand the same sophistication that has been applied to print, TV and desktop measurement to gauge campaigns' effectiveness and justify their growing mobile budget.

3. **Big Data will drive engagement, retention and revenue:** The focus on Big Data will shift to smart data. Mobile marketers will start paying more attention to metrics that go beyond data gathering to the analysis of deep granular information (e.g., location, coupon clicks, organic versus targeted re-engagement) that provides customer context and makes for successful targeting of individuals. The result makes for smarter, more engaged customers, driving both retention (far less costly than acquiring new customers) and revenue.

4. **Marketers will fine-tune their mobile messaging:** A/B split testing for mobile campaigns will boom and become a regular part of app development and management. New startups offering analytics services that go far beyond download counts and open rates to deliver better engagement will come on the scene. Through A/B split testing and more precise targeting marketers will be more effective, fine-tuning their marketing messages to perfection. Bombarding customers and users with poorly timed or irrelevant mobile messages will become so 2012.

5. **Mobile metrics will reach beyond downloads, swipes and taps:** Not only will marketers be doing more A/B testing, they will be using gathered data for message retargeting to unresponsive customers and users, leaving no stone unturned in their quest for maximum engagement. There will be

significant investment in metrics like action analytics, campaigns tied to actions and ROI, that go beyond simply tracking who downloaded what, when, and how many times. And while there might not be an ironclad set of industry-wide measurement standards by the end of 2013, mobile metrics will make huge strides in opening up a world of constant testing, feedback and improvement for marketers and consumers alike.

MOBILE ANALYTICS NOW AND INTO THE FUTURE

Mobile technology will continue to expand its reach even into some of the world's most remote places: You can already get a cellular signal at Mt. Everest Base Camp (Shahid, 2010). As the world's emerging markets increasingly adopt this technology to complete everyday tasks and transactions, the medium presents an opportunity for brands to engage, retain and maximize the value of ever-larger audiences. Along with their customers, today's marketers are building the mobile messaging space into a moneymaking powerhouse.

However, as device adoption soars amid a growing sea of Big Data, marketers will demand more sophisticated tools for gauging message impact and monetizing their messaging campaigns. Through techniques such as A/B split testing and retargeting, the burgeoning "action analytics" industry will provide mobile marketers with the edge needed to remain at the top of customers' minds, opening up a world of constant testing and improvement.

This means more thoughtful, intelligent and targeted campaigns delivering higher returns and a better overall mobile experience. Deep granular metrics that paint detailed, individualized customer portraits can help brands go the extra mile to get the kind of meaningful engagement and robust ROI they are looking for, not just now, but for years to come.

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USING NEUROMARKETING TO DISCOVER HOW WE REALLY FEEL ABOUT APPS

Melody Adhami

Abstract:

Mobile marketing agency Plastic Mobile and neuromarketing firm True Impact Marketing use cutting-edge neuromarketing technology to determine what really resonates with users when browsing, selecting and purchasing items on mobile. The two firms used brain-imaging technology to gather insights on how users are feeling and reacting to mobile commerce experiences. Thirty participants used the iPhone to navigate three transactional applications through a pre-determined purchase path while using EEG and eye tracking hardware. These devices analyzed the emotional and attentional activation of the brain, and what aspects of the applications saw the most visual attention. Participants were asked to complete two surveys, one before and one after using the applications, to garner information on the implications of mobile applications to brand perception. Results showed that users do not always say what they are really thinking or seeing, that apps have a significant impact on overall brand perception and that user experience impacts on whether or not the user shops in the app.

INTRODUCTION

While moving out of its adolescence, mobile is still the new kid in town in the digital playground. But its growing global ubiquity has seen it garner more and more attention from brands taking to the idea of connecting with their customer anytime, anywhere.

As a result of its increasing consumer adoption, an increasing amount of research has been conducted to determine what business opportunities mobile presents as an added channel for driving revenues through m-commerce. While the quantitative data created and consumed every day by the mobile industry is imperative to understanding this, the value of qualitative information seems to have been forgotten. In particular, mobile's implicit intimate nature with the consumer has lead mobile marketing agency Plastic Mobile to wonder about the true engagement people experience when interacting with applications. Plastic Mobile partnered with True Impact Marketing, a neuromarketing firm, to study the implications of emotional and attentional engagement with mobile commerce enabled apps.

Neuromarketing involves the use of brain imaging technology to gather consumer insights. In a

neuromarketing study, electroencephalography (EEG) headsets are placed on the heads of participants. The brain's electrical activity (brain wave data) is recorded while the individual is exposed to various media stimuli. The data is decoded into distinct metrics: emotional engagement and attentional activation.

By looking at three phases of the customer experience - discovery, selection and conversion - the study set out to determine four main learnings:

1. Advantages and obstacles in user experience
2. Impact on brand emphasis
3. Engagement
4. Qualitative versus quantitative

After evaluating the phases of customer experience, researchers hoped to answer the following three research questions:

RQ1: What lessons can be learned by measuring the impact of three different mobile applications on the user's emotional engagement and attentional activation?

RQ2: What are the differences and similarities between implicit and explicit user evaluations?

RQ3: At different stages of navigation, how “engaged” are the users and what are the factors influencing engagement?

METHODOLOGY

The study participants consisted of 30 young professionals aged 25 to 45 who owned and frequently used an iPhone 4, 4S or 5.

By applying neuroscience to this diverse group of users while they interacted with transactional mobile applications from Best Buy, Hyatt and Pizza Pizza, researchers hoped to gather a better understanding of what makes a successful purchasing experience in a mobile application.

The participants were also asked to complete two surveys; one survey before using the apps, and one afterward. The surveys were used to assess the spoken or “explicit” opinions the participants had of each brand, as well as mobile usage patterns before and after actually experiencing the apps.

The eye tracking testing was conducted by allowing participants to navigate each application freely for 1 to 2 minutes. This allowed for the gathering of qualitative insights about the first impressions and most visited pages.

The EEG testing was conducted to determine qualitative and quantitative insights about brain reaction, or “implicit” data, and visual attention. The participants were asked to conduct these five consecutive steps for each of the three mobile applications.

1. Open the app
2. Browse for a previously determined product
3. Select the product
4. Proceed to the checkout screen
5. Make a purchase (participants did not click the final purchase button, so no items were actually bought).

The researchers analyzed left-right alpha asymmetry in the pre-frontal brain cortex to measure

and track changes in subjects’ emotional reactions. Based on studies by neuroscientists Richard Davidson, Eddie Harmon-Jones, Niklas Ravaja, Rafal Ohme and others, greater relative activity in the left frontal region strongly correlates with approachable motivations, including liking, wanting, motivating to action, purchase intent, and willingness-to-pay. Greater relative activity in the right frontal region correlates with withdrawal motivations, such as disliking, disgust and avoidance behaviour.

The team also analyzed alpha wave desynchronization in the occipital cortex in order to measure and track respondents’ activation of attention. Based on studies by neuroscientists Michael Rothschild, Wolfgang Klimesch, Marty Woldorff and others, a high degree of desynchronization of the alpha band (drop in relative alpha power) in the occipital region correlates with amplified attentional activation. Increases in attentional activation are strongly correlated with recall, cognitive processing, and learning.

RESULTS AND IMPLICATIONS

We Do Not Say What We Mean

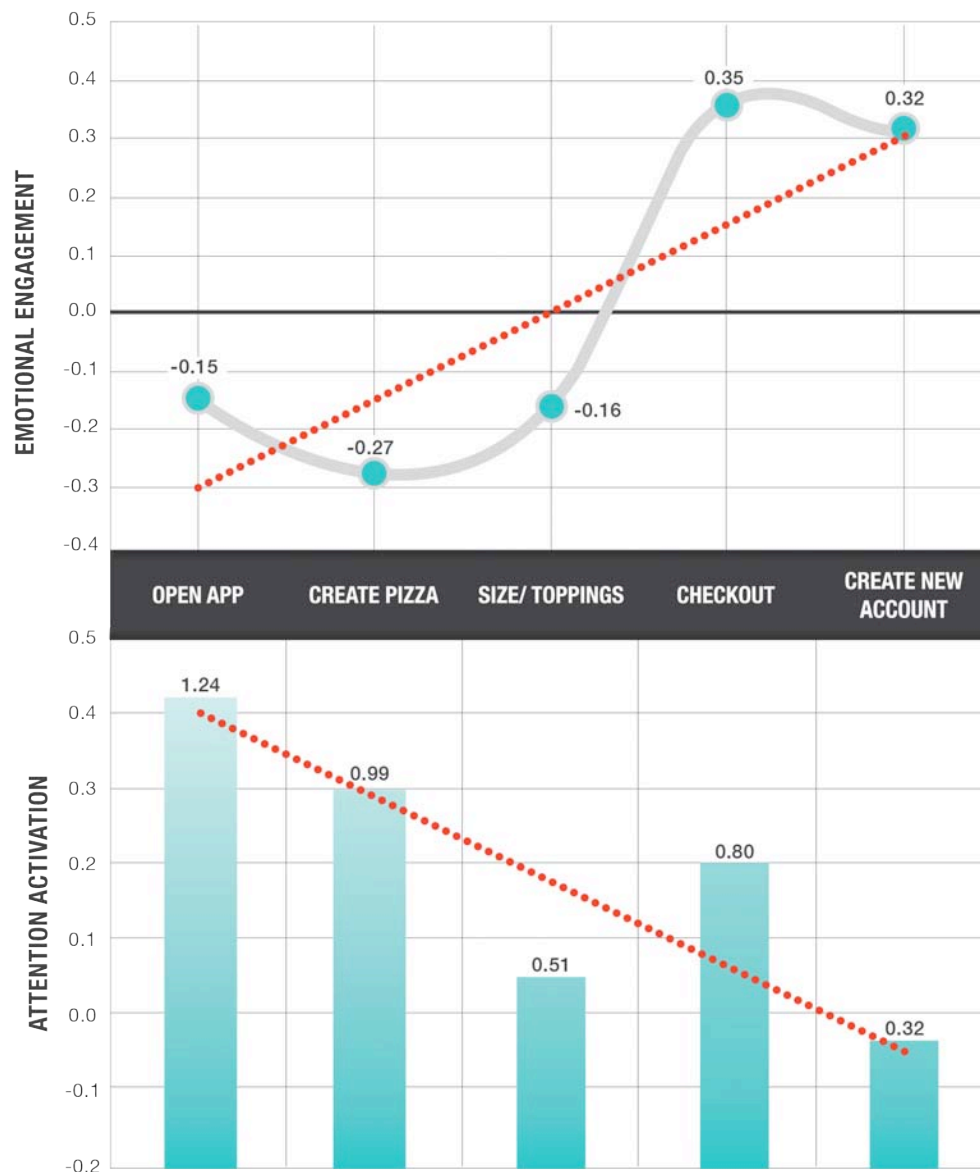
Along with the EEG and eye tracking experiment, the participants filled out two surveys; one prior to the experiment, and one afterward. The pre-experiment survey assessed the spoken/explicit opinions of each brand and mobile usage patterns. The post-experiment survey assessed those spoken/explicit opinions after utilizing each app. The results of the two surveys were compared to what the eye tracking and EEG studies produced to evaluate changes in brand opinion before and after using the apps.

As marketers, we understand the implications of external pressure on the responses given by consumers. However, we were very interested to find that, not only do most consumers not mean what they say, but what their emotional and attentional engagement suggests is far from what they said.

For instance, when asked to identify their favourite part of the transaction process, a majority of participants identified the selection stage as the part they liked the best for all three apps. However, it was the check out stage that reflected the highest level of

engagement in the EEG study, particularly in the case of the Pizza Pizza application. As participants neared the end of the transaction, they become more and more positively engaged (Figure 1).

Figure 1: EEG results showing Emotional Engagement and Attention Activation of Pizza Pizza app



Looks Really Do Matter

Brands go to great lengths to ensure that their products, services, and traditional and online properties are visually appealing. However, the diverse and limited real estate of mobile screens makes designing an amazing customer experience a challenging task. An average desktop screen size ranges from 21 to 24 inches, compared to the four to five inches of a smartphone screen.

For example, during the selection process, the Hyatt application offered a number of options in a long and inaccessible list. According to the eye tracking, majority of participants did not focus on these images closely or for a significant length of time as there were too many and overall, and they fought with the text for the user's attention.

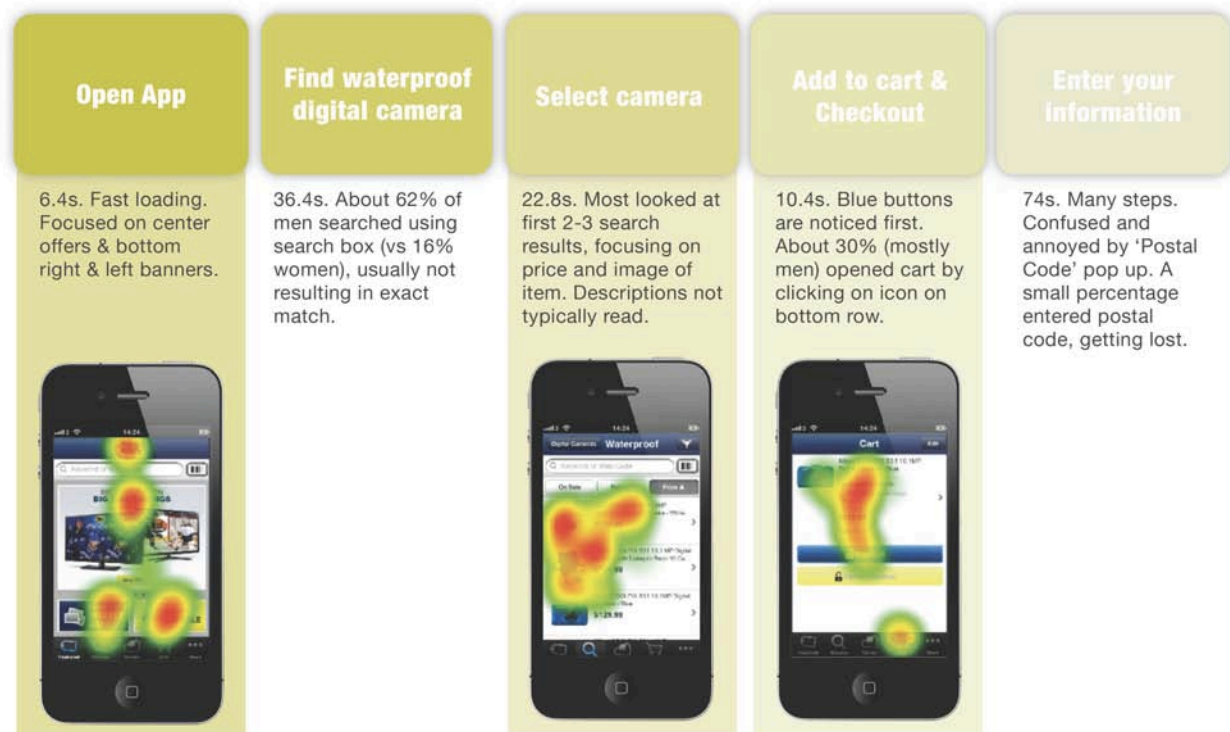
Making The Most Of A Small Space

Being a relatively young technology still, and with so many diverse hardware options, optimizing the screen space can be a tricky practice. According to the results of the eye tracking portion of the study,

participants were more responsive to images than text, and were often emotionally and attentionally engaged when presented with high fidelity imagery, as in the case of Pizza Pizza.

So how does the use of the mobile screen affect the customer journey? The study found that when in the discovery phase, participants spent more time on average viewing images and price as opposed to description and content. When a product was chosen in the selection stage, the visual attention shifted from the image to description, with price remaining a consistent focus for participants. As seen in Figure 2, Best Buy utilized roughly a quarter of design space available for each product and the remaining space on name, a brief description and cost info. Per the eye tracking gauge, participants ignored descriptions, focusing their attention on images and price. The top performing stages are home page, selecting camera, and first check out screen. Navigation time per screen averaged 30 seconds; total navigation time averaged 2.3 minutes.

Figure 2: Best Buy eye tracking research showing areas of visual attention

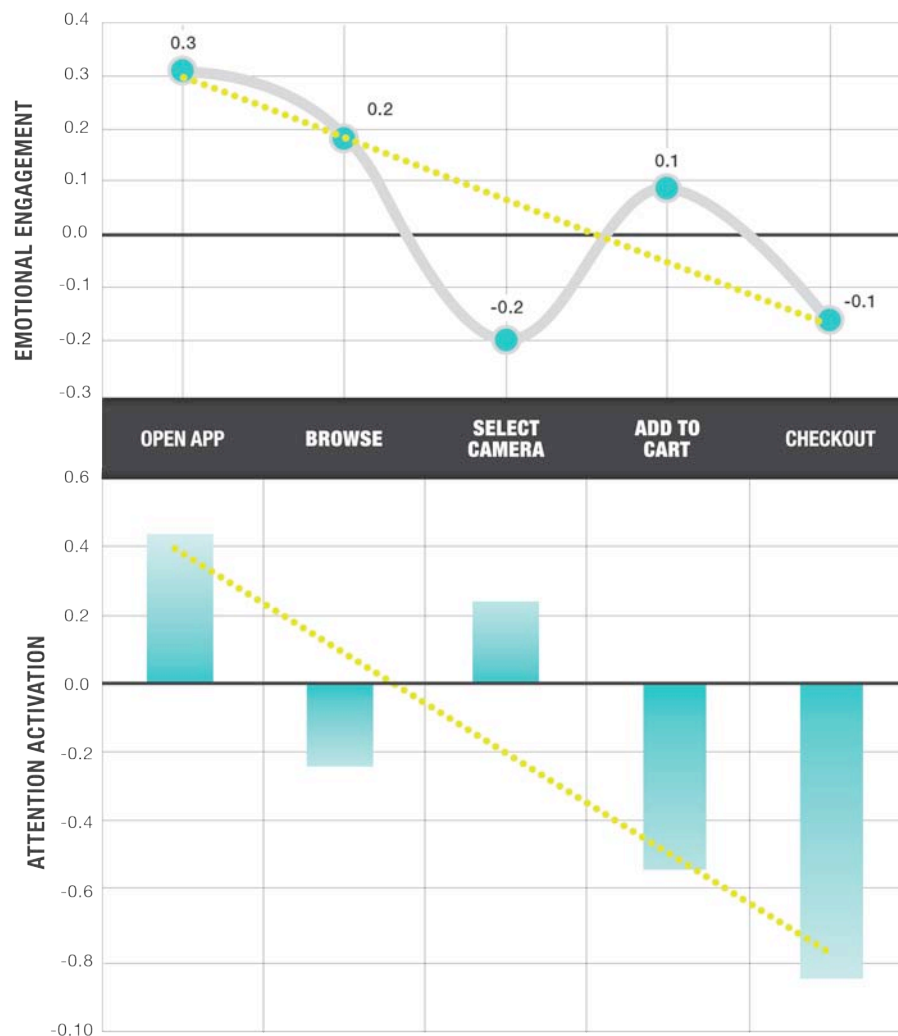


However, the EEG results (Figure 3) indicated that a negative emotional engagement was associated when browsing, possibly due to the complicated interface.

With the majority of participants focusing on

image and cost, Best Buy can further optimize their mobile experience by allocating more screen space toward images of merchandise to keep customers emotionally engaged.

Figure 3: EEG results showing Emotional Engagement and Attention Activation of Best Buy app



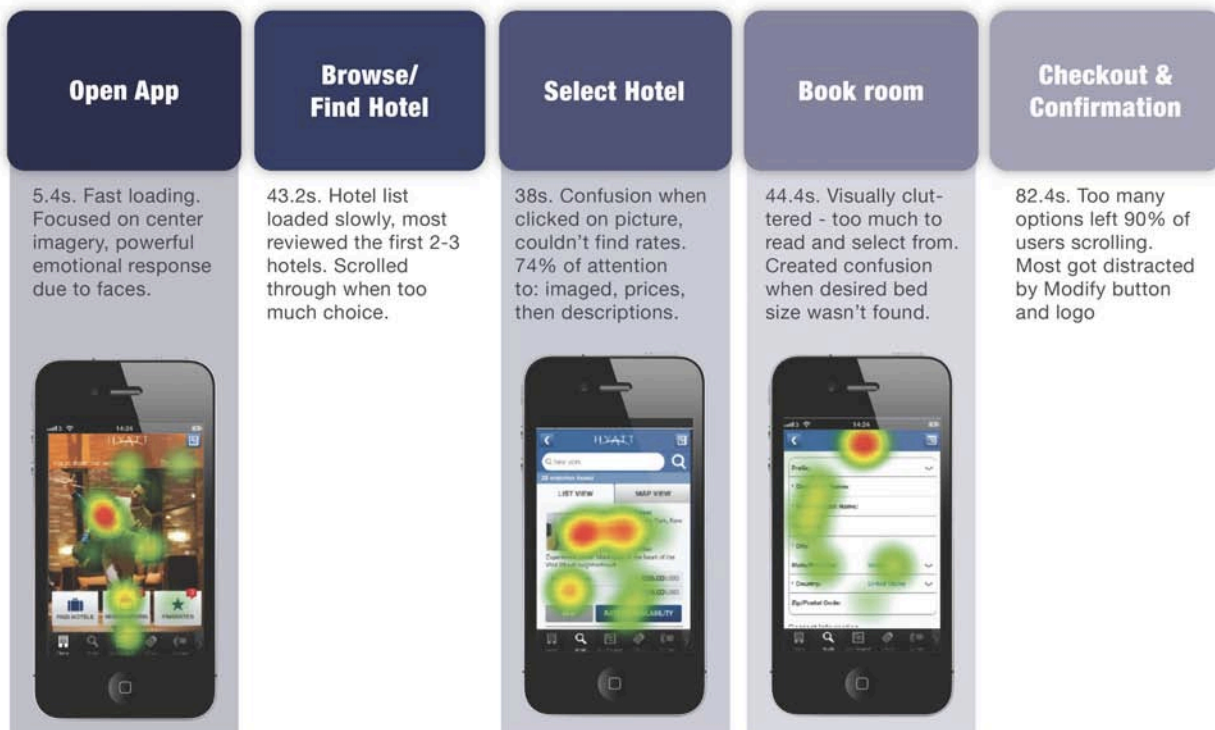
Pizza Pizza employs an opposite approach, devoting roughly half of the screen space available to an image (Figure 4). The results show that the participants react similarly, focusing their attention on the visual stimuli, but to a higher positive emotional engagement during the discovery phase.

When testing the Hyatt mobile app (Figure 5), participants were confused and many were unable to locate rates. The app was visually cluttered with too much to read and select from. Due to the overwhelming interface, test participants had low emotional scores throughout each phase.

Figure 4: Pizza Pizza eye tracking research showing areas of visual attention



Figure 5: Hyatt eye tracking research showing areas of visual attention



Mobile Impacts Brand Perception

According to the study, 72% of participants believe that mobile applications should be an extension of a brand's website. This is good news given that companies spend countless hours and millions of dollars crafting a brand image.

In the survey conducted prior to using the Hyatt app, participants noted words like classy, comfort, luxury and elegant to describe the Hyatt brand. This is aligned with the perception and identity Hyatt consciously cultivates around its brand. However, in the post-experiment survey, participants identified Hyatt as expensive, complicated and premium (Figures 6a, 6b).

Figure 6a: Hyatt brand descriptions from pre-experiment survey



Figure 6b: Hyatt brand descriptions from post-experiment survey



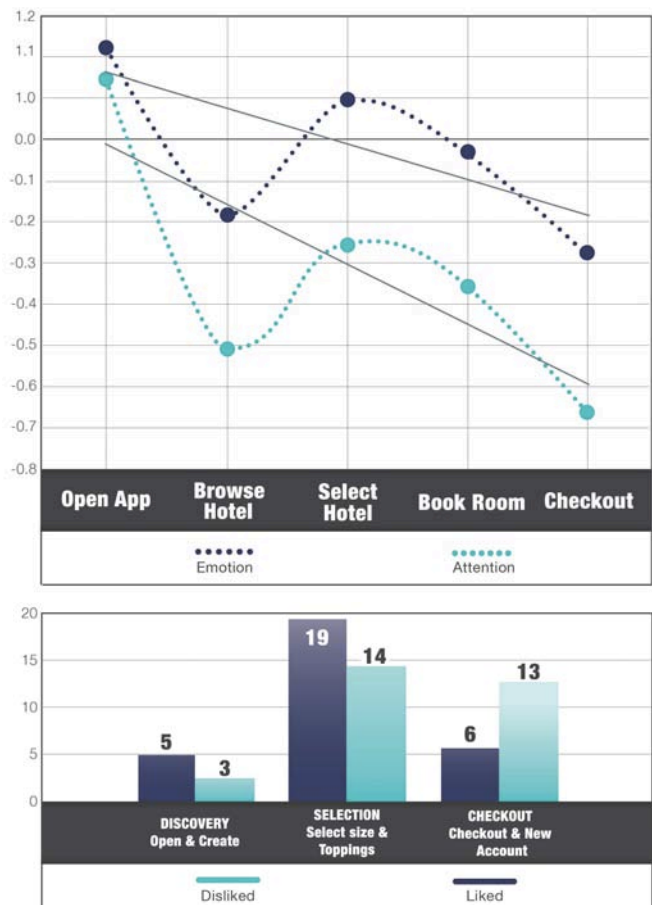
The Hyatt mobile experience changed the participants' perception of the brand in a negative way. This shift in their brand affinity is conducive to the results from the EEG and eye tracking studies, which showed negative attentional activation and lower engagement levels over the course of the mobile transaction, as seen in Figure 7.

On the other hand, participants described the Pizza Pizza brand as delicious, reliable and fun in the

pre-test survey. After utilizing the application, their brand perception was similar, if not more positive. Participants found that the Pizza Pizza app worked as an extension of the brand, garnering a positive user experience and overall high levels of attention and positive engagement.

We know that users prefer simple, convenient and easy-to-use experience with rich visual imagery. In this study participants found the Hyatt app to be complicated and 38% said they would not use the app again. Whereas, Pizza Pizza generated a positive brand perception and 79% of participants said they would use the Pizza Pizza app again, and 83% would recommend the app to a friend, as seen in Figure 1 above.

Figure 7: The Hyatt app saw attention and emotional engagement trend downward according to brain metrics.



It Is Not How You Start, But How You Finish

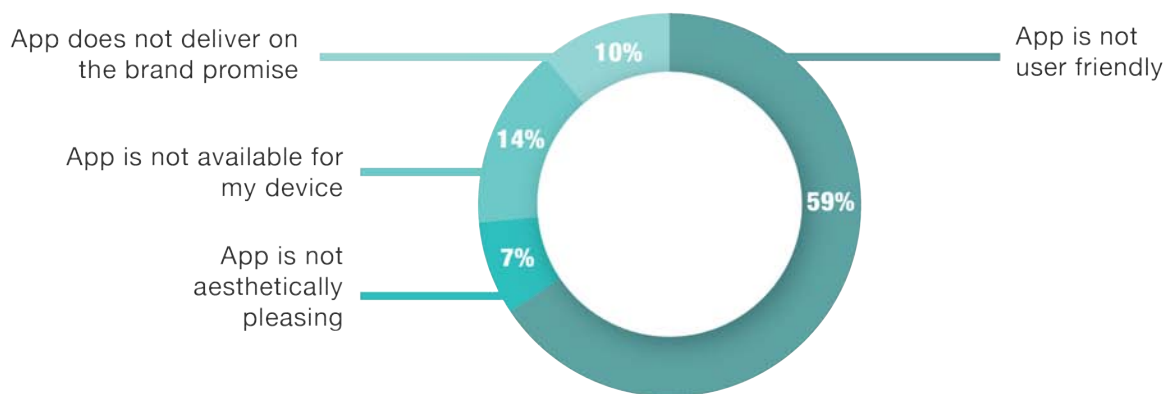
In the case of the Pizza Pizza app, the attentional activation began very high and continued to stay above the median line all the way throughout the transaction. Meaning, at no point during the process were the participants bored. Conversely, the Best Buy and Hyatt apps had a significant decrease in attentional activation to below the median line, indicating that the participants became progressively more bored with the application throughout the

checkout process.

Interestingly, the pre-experiment survey found that the number one reason (59%) users do not make an in-app purchase is because it is not user friendly (Figure 8). The attentional activation information from the EEG study and the response from the survey suggest that user experience is as much a consideration during the end of the path to purchase as it is during the selection process, which has traditionally been the focus for marketers.

Figure 8: Pre-experiment survey results showing reasons users do not make an in-app purchase

I am discouraged to shop if the:



CONCLUSIONS

By looking to users qualitative, emotional engagement with three distinct transaction applications, we were able to redefine the way we determine how people truly respond to in a mobile commerce situation.

We know that rich imagery, simple, fast and convenient processes are the way to a mobile users heart and to a businesses' bottom line. And now, thanks to the qualitative data from this neuromarketing testing ground, we understand what it is about these elements in a mobile transaction that make a difference to the user.

MANAGERIAL IMPLICATIONS

By allowing us to see never before seen qualitative data on users' emotional and attentional reactions to mobile commerce experiences, we will be

better able to determine what really resonates with users when browsing, selecting and purchasing items on mobile.

The study has opened the door for brands, companies and agencies to enhance quality assurance testing and add a robust method of user experience testing to the creation of mobile experiences. For instance, while we know that browsing is what most mobile users are doing on their devices and what they say they enjoy the most, the study found that it is not necessarily the part that gets them most excited. Understanding this can help add value to those parts of the user journey that we are most attentionally engaged with.

Likewise, knowing what types of images resonate with a particular user audience by testing emotional

engagement and eye tracking can better help brands engage users throughout a mobile journey.

Ultimately, by determining what really resonates with users we can better identify how mobile user experience design and architecting should be applied to ensure a solid mobile experience.

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BENEFITS OF MOBILE COMMERCE IN THE PAY PARKING INDUSTRY: HOW THE LAUNCH OF THE *P\$ MOBILE SERVICE* HAS CHANGED THE PARKING EXPERIENCE IN MONTRÉAL

Brady Murphy

Abstract:

Mobile smartphone usage in Canada has grown by double digits over the last five years, with 48% of Canadians using smartphones in March 2012, up from 33% in 2011 (CWTA, 2012). Canadian consumers are taking advantage of new features and functionality on their mobile devices that are meant to save them time, make their lives easier and more enjoyable, and generally, give them a better user experience. In this case study, you will learn how TC Media worked with the Société en Commandite Stationnement de Montréal to launch the P\$ Mobile Service, a mobile commerce application that empowers Montréalers to use their handheld devices to simplify one of the most common and aggravating tasks faced by drivers: paying for parking. To date, the P\$ Mobile Service has processed more than 1 million transactions, and continues to experience growth of more than 200,000 transactions per month. The success of this initiative illustrates the power of mobile technology to provide simple, engaging and cost-effective solutions to address consumers' needs.

Keywords: *mobile/m-commerce, mobile payment, mobile applications/apps, strategy, mobile web, parking, Montréal, Québec*

INTRODUCTION

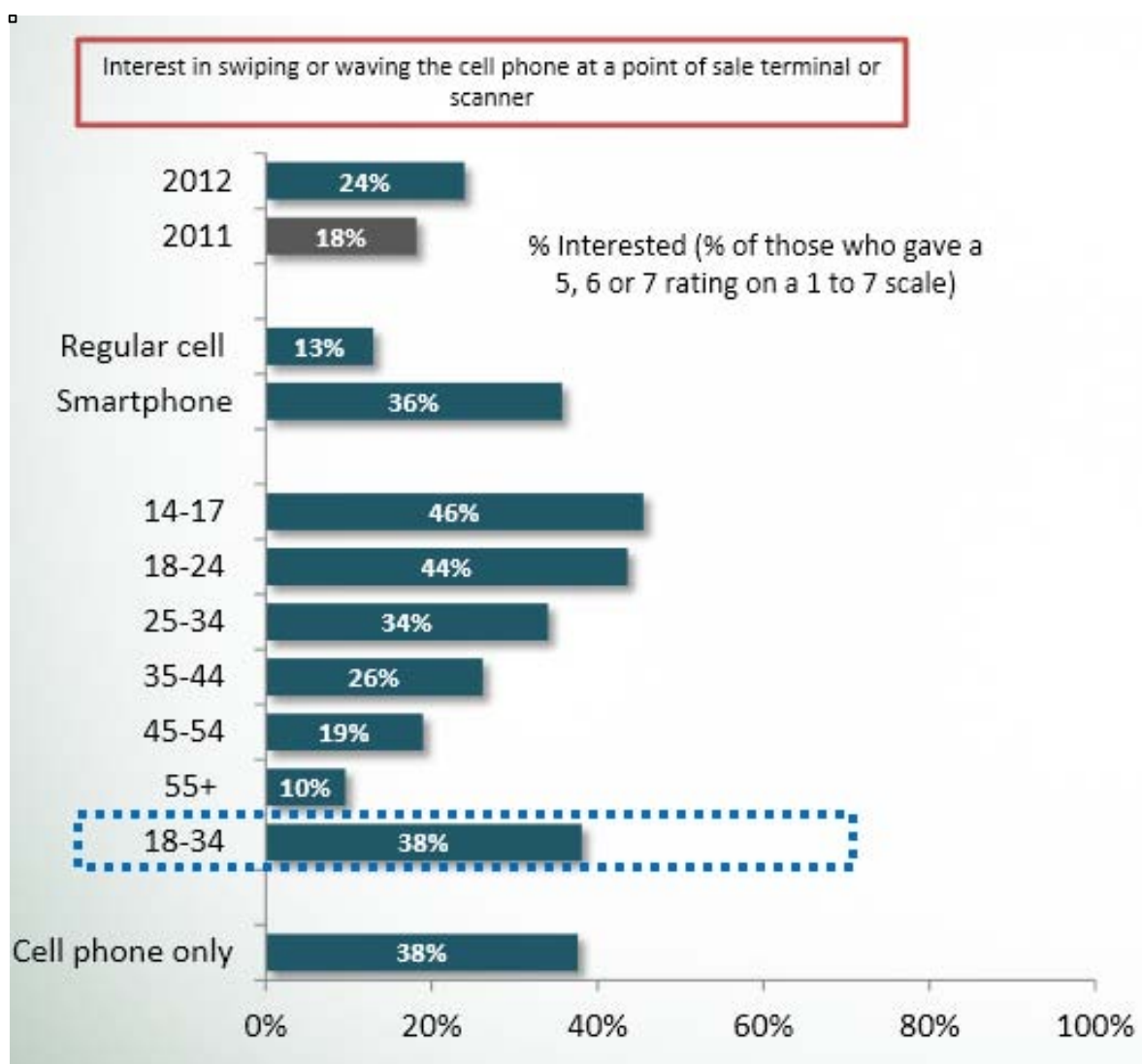
Recent research from the Canadian Wireless Telecommunications Association (CWTA), the authority on wireless issues, developments and trends in Canada, reinforces the global trend for consumers to continue to seek out easier and more convenient ways to complete payment transactions while on the go. Significantly, a 2012 study (Figure 1) showed increasing interest in mobile payment services, especially prevalent among 18- to 34-year-old Canadians (38%) (CWTA, 2012).

This interest in mobile payment options, and more broadly, mobile commerce (including banking)

has been growing over time. In 2009, an RFP was issued by the Société en Commandite Stationnement de Montréal (SCSM) to develop mobile functionality that would make paying for parking in Montreal, Québec more efficient.

After careful review, the SCSM selected Lipso Systems as their partner to launch this initiative. Lipso was acquired by TC Transcontinental soon after being selected, and TC's new mobile division helped to develop the strategy, define a detailed roadmap, and launch a multi-channel approach in order to reach the largest possible community of users.

Figure 1: Interest in mobile payment services (CWTA, 2012)



Note: n=2011 ages 14+

BACKGROUND

Montréal, the largest city in the province of Québec and the second-largest city in Canada, has a high-density metropolitan area with a population of more than 3.8 million people. With nineteen large boroughs making up the city, it is not surprising that motorists experience significant traffic congestion, especially during commutes to and from the main financial district in downtown Montréal. Even with such vehicular congestion, many people continue to

drive downtown on a daily basis, putting pressure on the well-established but legacy parking system.

The main parking system in Montréal is based on a pay-by-space model. This requires users to provide payment against their chosen parking space via a pay station terminal positioned near to their vehicle. Every parking space (currently totaling more than 17,000) is labelled with a unique alpha-numeric tag. Enforcement of payments for parking spaces is monitored by members of the Montréal Police

Department who are made aware of unpaid or expired tickets via motion sensors located at each parking space, which issue alerts to enforcement officers if a user has parked and failed to pay for their space.

On the one hand, this is much more efficient than the traditional pay-and-display model, as the officers are not required to scan vehicle windshields to investigate. However, though this model is more convenient from an enforcement perspective, consumers were rallying for new solutions to ensure that they did not have to run back to the pay terminal to extend their parking stay.

Thus, based on the clear need suggested by consumer feedback, the SCSM outlined a list of key criteria for this improved parking solution. The organization was looking for a partner that could deliver an innovative digital platform, one that would:

- Allow consumers to update their parking status while on-the-go
- Be Payment Card Industry (PCI) compliant, allowing TC Media to store and process credit card information so users would not need to repeatedly re-enter their information
- Offer a screen-agnostic experience that all consumers, regardless of the device or channel, could access easily and quickly
- Establish opportunities for SCSM management to track transactions and develop detailed reporting based on such metrics as parking space, platform used, consumer uptake and usage frequency
- Feature an end-to-end solution, taking into account strategic insights, user experience, development, quality assurance and deployment, plus a holistic go-to-market plan incorporating multi-channel marketing and promotional initiatives, first-level technical support and post-launch call centre management.

THE SOLUTION

Together, TC Media and the SCSM developed a vision for a mobile payment solution that would simplify consumers' lives and at the same time respect the SCSM's need to be consistent with existing parking management guidelines and processes.

TC Media employed a multi-phased approach, first, to define the market need for such a solution via population studies, consumer surveys, and business and technical workshops.

This in-depth research was then matched against the SCSM's business objectives, to define a roadmap that featured leading-edge services integrating "out of the box" and proprietary platforms, a technological architecture and workflow flexible enough to marry with legacy infrastructure, financial systems and payment processes. And above all, the partners were determined to deliver a top-notch user experience for consumers who maintain fast-paced, urban lifestyles.

After several months of detailed planning and development, TC Media and the SCSM devised a strategic path forward that would offer the broadest consumer appeal possible, with multiple engagement points. The user experience was as follows:

- Following a simple sign-up process, consumers were only a few quick finger taps away from paying and/or renewing their parking, whether from the comforts of their vehicles, their offices, or wherever they happened to find themselves.
- Users could access the solution across three channels: a mobile website, mobile apps (including iPhone, Android and Blackberry versions), and a desktop website.
- Among the set of initial features was an SMS (texting) reminder which users could sign up to receive approximately fifteen minutes prior to the expiration of their parking time.

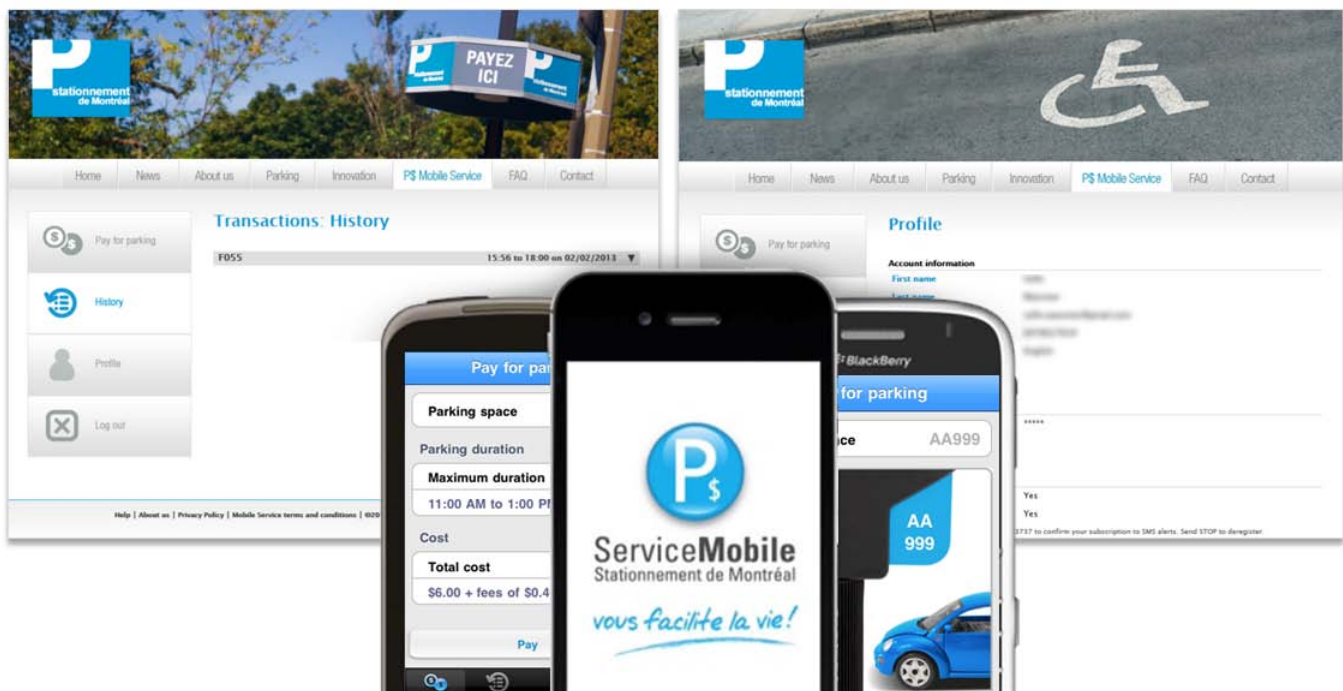
Titled the *P\$ Mobile Service*, the new mobile parking payment service was soft-launched in July 2012, and immediately, consumer uptake (55,000 subscriptions in the first three months) proved the value of the concept (Figure 2). Further marketing initiatives solidified the value of the solution in consumers' eyes and maximized usage. This included a media blitz taking advantage of TC Media-owned as well as broader promotional channels:

- Pay stations and place-based media were used to promote the solution, directing users to initiate app downloads via associated SMS and QR codes
- Online and mobile media advertising on TC Media properties, such as *Canadian Living*, *The Hockey News*, *ELLE Canada*, *ELLE Québec*, *lesaffaires.com*, and local sites like *Cités Nouvelles*, *Courrier Ahuntsic*, and *Courrier Bordeaux-Cartierville*, among others

- Media placement with TC Media partners, *Metro* and *La Presse*, highlighting the new payment option
- Guerilla marketing directed at increasing familiarity with the new tool
- Out-of-home advertising on Astral Media properties across Montréal
- Social media (Twitter, YouTube) and email campaigns used as promotional vehicles, as well as channels for consumers to voice perspectives on the solution
- PR initiatives executed to generate awareness and extend the reach of the platform.

Overall, these additional promotional initiatives, combined with the ease of use and applied value of the solution itself, secured a position for the *P\$ Mobile Service* as a featured application on the Canadian iTunes storefront.

Figure 2: *P\$ Mobile Service* mobile parking payment service application



RESULTS

The unique value proposition of the *P\$ Mobile Service*, combined with multifaceted promotional initiatives, led to strong engagement rates from the outset. More than 55,000 subscriptions were logged within the first three months post-launch (Figure 3), with 20% of sign-ups in the first week. And less than a year later, the *P\$ Mobile Service* continues to experience significant adoption rates, with a total of more than 150,000 consumers completing more than 1 million transactions to date and more than 50,000 uses logged per week and growing (as of March 31, 2013).

In addition, the holistic media plan surrounding the service has promoted significant return on investment: In the first six months the service achieved 15 million media impressions, QR codes placed on payment terminals have been scanned more than 65,000 times, and the two YouTube promotional videos (one in English, one in French) have almost 10,000 views combined.

Finally, public response to the solution has been outstanding, with consistently positive feedback from users underlining the key qualities of the solution that address their needs: convenience, accessibility, ease of use, and reliability of reminders.

KEY LEARNINGS

Though the *P\$ Mobile Service* has been in-market for just one year, TC Media and the SCSM have already garnered a wealth of insights that are being used to plan for the next phases of this solution. These relate to the implementation of the marketing plan, the uptake of different mobile services by consumers, and implications for the mobile and parking industries as a whole.

Holistic Marketing Planning, the Renewed Value of QR codes, and Implications for the Marketplace

It seems commonsense to highlight the importance of a holistic marketing plan and go-to-market strategy that takes into account consumers' unique mobile payment needs. However, the early success and ongoing growth of the *P\$ Mobile Service* is a testament to the need to build solutions that target the pain-points of everyday users and reach consumers using a multitude of different, layered channels to reinforce the value of the new technology to their daily lives.

A multifaceted marketing plan was crucial in delivering the high level of engagement this solution has experienced, especially in the first six months. TC Media built a promotion strategy that hit upon many different touch points over time, including properties

Figure 3: *P\$ Mobile Service*, monthly transactions (June 2012-March 2013)



from within TC's portfolio, as well as partner media channels and grassroots promo delivery, including stickers at payment booths and terminals; guerilla marketing tactics; mobile, digital and print (primarily newspaper) advertising; editorial content and earned media; email deployments; social media; and, SEO and SEM. Overall, after careful monitoring, the out-of-home sticker placements, SEO and SEM proved to be the most successful promotional tactics.

At the same time, the partners were surprised to learn that QR codes provided seven-times more engagement than the SMS call-to-action on out-of-home stickers, renewed evidence that two-dimensional bar code technology is valued by consumers, even as the Canadian market experiences the growth of newer mobile messaging innovations.

SUMMARY: THE P\$ MOBILE SERVICE—A WIN-WIN-WIN SOLUTION

By bringing Montréal pay parking terminals to users' devices, the *P\$ Mobile Service* represents an important update to the age-old process of paying for parking. In a district that is highly dependent on commuter traffic to keep core businesses running, this major Canadian city was a prime candidate to test the value of mobile payment innovation, to meet the growing need of consumers for a fast, efficient, and easy-to-use solution to keep their parking payments up-to-date.

Benefits for Consumers

Consumers seem willing to use this premium service (with a fee of \$0.40 on each transaction) if it means they can access a user-friendly and secure solution to pay for coveted downtown parking and also avoid receiving expired parking tickets of \$52.

Program results show that drivers have embraced this new service wholeheartedly, completing two-to-three transactions per week ongoing, accounting for 25% of all SCSM credit card transactions, and 10% of the number of SCSM operations overall.

As an added feature, by visiting the customer portal users can review their transactional history and download receipts on the fly, a benefit to both cost-conscious commuters as well as lavish downtown drivers.

Benefits for the Partners

This new innovation in parking, after many years of the same systems being employed to process payment transactions on the streets of Montréal, represents a groundbreaking opportunity for the SCSM to continue to learn more about consumers and their commuting and parking behavior. This opens up the possibility to experiment with pricing optimization and elasticity models, always a sticking point in parking options in high-density locales. This solution allows the SCSM to collect rich data on motorists, not only of parking terminal usage, but also for heat mapping of mobile activity which can inform where capital-intensive pay stations could be streamlined moving forward.

Additionally, the integration of push SMS and email notifications represents a new communication channel for SCSM, one that will promote better dialogue and the opportunity to continue to learn more about consumers' changing needs over time.

Finally, reducing the number of terminals in favour of mobile interactivity will contribute to substantially lower overhead and increase margins, based on continuing growth of the premium mobile services.

TC Media has also benefitted from its partnership with the SCSM. In developing the *P\$ Mobile Service*, TC Media and the SCSM have introduced a new tool to the Canadian marketplace, which is a direct reflection of current technological trends being applied to address the unique needs of a local consumer base. The partnership with the SCSM was and continues to be highly valued by TC Media, as the ongoing collaboration allows both parties to continue to

enhance their expertise in the ever-evolving mobile technology arena.

CONCLUSION—THE VALUE OF MOBILE COMMERCE TECHNOLOGY IN THE PARKING SECTOR, TODAY AND IN THE FUTURE

Based on the strong initial results in the first year since the *P\$ Mobile Service* was introduced into the Montreal market, it is clear that motorists are embracing solutions that make their daily activities easier and more efficient.

Through continued research and investigation, TC Media and the Société en Commandite Stationnement de Montréal plan to introduce new features and functionality to the *P\$ Mobile Service* that will bring the best qualities of mobile technology to consumers across the greater Montréal area. At the same time, the value of this solution to all parties involved—providing an improved user experience to consumers, while also saving them from accumulating costly parking tickets; building the technological capabilities and knowledge of Montréal's leading parking operations organization, while reinforcing a powerful partnership with Canada's leading media innovations companies—holds amazing opportunities for similar organizations in other markets, as well as other travel-related marketers.

And overall, the success of the *P\$ Mobile Service* initiative, a solution envisioned and implemented by TC Media and the Société en Commandite Stationnement de Montréal in 2012, illustrates the power of mobile technology to provide simple, engaging and cost-effective solutions to address consumers' needs.

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OUT OF THE CLOSETS AND ONTO THE PHONE: USING MOBILE TO FIGHT HOMOPHOBIA AND SUPPORT THE LESBIAN, GAY, BISEXUAL AND TRANSGENDERED COMMUNITY

Robin Heisey, Cynthia Roach

INTRODUCTION

As an integrated advertising agency dedicated to channel agnosticism, DraftFCB has always looked at mobile technology in a broader context of the overall messaging and user experience. In 2011, the organization recognized an opportunity to put this approach to work for an important social cause when we joined forces with the Parents, Families And Friends Of Lesbians And Gays (PFLAG) Of Canada. PFLAG is Canada's only national organization that helps those who are struggling with issues of sexual orientation and gender identity. Since 2003, the name "PFLAG" has been officially designated as only a name and not an acronym, in order to stress the organization's inclusiveness for those who identify as bisexual, transgender, transsexual, two-spirit, intersex, queer, or those who are still questioning their gender identity and/or sexual orientation. It supports, educates and provides resources to parents, families, friends and colleagues with questions or concerns. While DraftFCB had not previously worked with PFLAG, the company had long-been a prominent supporter of workplace diversity in general, and LGBT support in particular, so the partnership was a natural one.

When we began our association with PFLAG, it had established a presence online and in social media,

but it had not utilized mobile technology in a significant way. But as the most personal and intimate communications channel (next to face-to-face communication), mobile represented an opportunity to extend the reach and amplify the presence of PFLAG in new and important ways.

THE SITUATION

Despite Canada's considerable body of equality rights legislation and the broadly growing acceptance of LGBT diversity, many families still feel isolated when they or someone they love comes out. In fact, 50% of LGBT youth feel uncomfortable talking to their parents (Egale Canada Human Rights Trust, 2011), and when they do, 26% are told to leave home (Ray, 2006). Even more troubling, 30% of all teen suicides are from the LGBT community (Figure 1) (Banks, 2001). Over the last few years, statistics like these have moved PFLAG into action.

PFLAG support groups have allowed people to share their stories to provide support anywhere they can: in church basements, living rooms and coffee shops. With only one paid employee and no marketing budget, PFLAG hadn't been able to extend that support through media channels. But with a recent rash of gay teen suicides in Canada, the time had come to bring these personal conversations to a broader audience.

Figure 1: A rash of suicides among gay teens reflected a tragic statistic, that 30% of all suicides are from the LGBT community, and provided further motivation for the PFLAG community to raise awareness of the issues and organization.



THE CHALLENGE

The personal nature of PFLAG's support and the organization's sensitivity and respect for privacy are some of the reasons it has been able to help thousands of Canadians. In particular, the PFLAG support groups allow people to come together and share what are often very intimate experiences in an emotionally safe and supportive environment. But in some ways these qualities also make it difficult for it to garner a profile. Nonetheless, hundreds of dedicated volunteers have helped it thrive; it now has more than 70 chapters from coast to coast and has benefited from up to \$25,000 in donated media in a given year, used to help spread the word or acquire donations.

Our challenge was to raise the profile of PFLAG by dramatizing the power of the support it provides then spread the message to a far broader audience beyond the confines of the traditional LGBT community, and to engage media partners to help. After all, just about everyone is a friend, a parent, a child, or a work colleague of an LGBT person.

In pure business terms, PFLAG's objective for the campaign was to drive donated media, and based on previous experience it was determined that \$100,000 CDN would be a big win. In addition, to support the broad reach of mobile, we wanted valuable, high visibility media with a correspondingly broad reach. Communications needed to expand past the gay-friendly publications and out-of-home (OOH) in urban gay communities to vehicles that touched the suburbs and small towns, reaching the most isolated and needy of the PFLAG audience.

THE SOLUTION

DraftFCB's strategic approach was three-fold. First, we needed to dial up the power of our message and the content we were sharing, to take the power and intimacy of a PFLAG support group to a national and very visible stage for the first time. Second, we decided to focus on mobile to share this powerful content in a more personal way and to create conversations. Finally, mobile would be central to innovations we would develop to engage media partners and encourage donations of their properties, donations that could be employed to drive users to our mobile experience while simultaneously generating mass impressions.

THE EXECUTION

Creating the Content

While testimonial approaches had been employed in filmed content successfully in the LGBT world (Ciszek, 2011), replicating the more specific experience of a support group presented a challenge. Filmed testimonials tend to have a reportage feel that mitigates against the intimacy of mobile, and the insertion of a camera into the interview process means that subjects often do not share the way they would in a support group.

Enter Brett Froomer and the Interrotron. Froomer is a Los Angeles-based director with a great deal of

documentary and interviewing experience. His style could be described as part-therapist, part-filmmaker, qualities that would help us uncover the kind of stories one might hear in a support group. To more closely simulate the support group experience, Froomer uses the Interrotron, a device invented by documentarian Erroll Morris. Essentially, two teleprompters are connected to two cameras; the Interrotron allows subjects to look directly into the interviewer's eyes (and the camera) as they are being filmed, with the camera being essentially invisible (Figure 2).

Figure 2: Interviews with PFLAG volunteers were conducted using the Interrotron, providing a startling intimacy that was ideal for mobile.



In early 2012, using the Interrotron in a midtown Toronto studio, Froomer interviewed 14 volunteers from the PFLAG community; the resulting content was undeniably powerful. The storytellers included Jazz, a young gay woman who would reveal her attempted suicide; Jennifer, the mom of a transgendered son who receives a dramatic voicemail; and 12-year-old Bryce, whose definition of family includes four gay parents, with a surprising twist. All are intensely personal stories delivered eye-to-eye to the user, and all through that most personal of media, mobile.

Deployment In Mobile

To share the testimonials captured by Froomer and the Interrotron, we created a WAP-enabled mobile experience where users could view, share and upload content (Figure 3). Every media touchpoint

drove to mobile, the most personal screen in the “three screen world,” and the best vehicle for beginning real conversations. This approach allowed us to take the power of the PFLAG stories and put them at the fingertips of people everywhere. And, more importantly for our business objectives, it put them in front of some of the biggest mass media donors in the country.

Figure 3: Mobile enabled users to continue the stories they had seen first in mass media, and to then submit their own.



Using Innovation In Mass Media to Drive To Mobile

Innovation was an important aspect of the campaign, not just in and of itself, but because it could help attract partnerships with media channels, companies that need to be associated with innovative ideas in order to compete in their categories. These innovations were all based on driving to mobile with QR codes or similar functionality and included a breakthrough and artful use of QR codes in OOH media; leveraging the penetration of personal video recorders (PVR) and online viewing to improve functionality for QR codes on TV; and replicating QR code functionality on radio using audio tagging of dialogue, a world first.

These response mechanisms were not only used to drive engagement on mobile, but to increase the drama of the creative approach employed in our mass media. To realize more fully the impact of our volunteers' stories, we used the time-honoured dramatic technique of the "cliffhanger." At crucial points, we would interrupt our stories with the QR code, which meant that for our audience to hear what happened next, they had to engage with our more powerful and far more private mobile experience.

QR Codes in 2D Media

Given that we were reaching out to drive a mass audience to mobile, OOH media, particularly transit shelters and vehicles, was key. While QR codes had become increasingly common in these channels, they had rarely been used so prominently or provocatively. Rather than being relegated to the bottom of a layout or beside a logo, the codes themselves appeared jarringly over the mouths of portraits of our storytellers, far larger than was typical, and looking almost like a muzzle, or more accurately, like a megaphone (Figure 4).

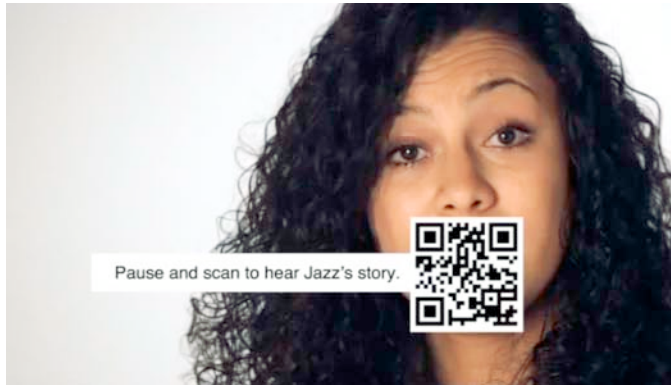
Figure 4: To drive mobile users to the online experience, out-of-home and transit mass advertising employed prominent and provocative use of QR codes to interrupt dramatic "cliffhanger" headlines.



QR Codes In Broadcast Television

Despite the explosion of online engagement, broadcast television continues to enjoy a preeminent position when it comes to mass reach against a broad demographic. Taking the same provocative approach used in the OOH media, we interrupted our television testimonials with a QR code, inserted at a crucial moment over the mouths of our subjects. Taking advantage of the increasing penetration of PVR's, we then invited users to "pause and scan" to hear the emotional conclusion on their mobile device (Figure 5).

Figure 5: Recognizing the reality of the three-screen world and the increasing penetration of PVR's, 15-, 30- and 60-second broadcast television spots prompted users to pause and scan with their mobile devices.

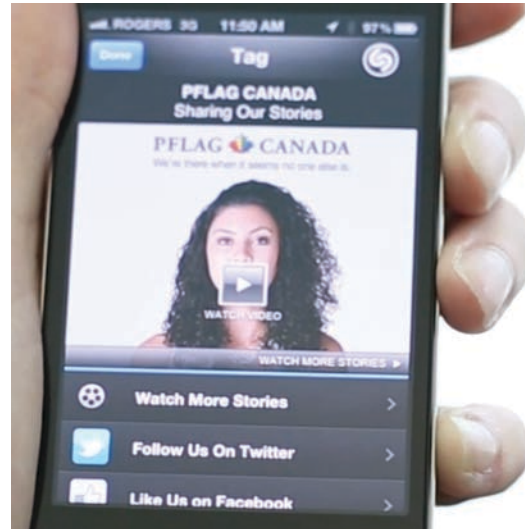


Replicating QR Codes In Radio

Possibly the world's most venerable "mobile" medium, radio was another channel that could allow us to extend our reach against a broad and mobile demographic, but the challenge lay in recreating our cliffhanger testimonials and QR functionality. So, in a worldwide media first, we brought that functionality to dialogue-based radio. Partnering with Shazam, we created audio tags of our narrator's voices, allowing the stories on radio to seamlessly continue to the mobile experience.

Shazam was originally conceived as a music tagging technology, and most users understandably believe the service is "musical," (i.e., that it recognizes tunes and melodies). In reality, it is an audio file tagging technology that compares a database of previously uploaded, specific audio files with the audio files that are scanned by the Shazam app on the user's mobile device. While this approach means Shazam will not currently work on live audio, musical covers or other specific files that are not in the database, it has the distinct advantage of working on *any* audio content, including the voice of a young woman talking about the day she was close to committing suicide (Figure 6).

Figure 6: In a world first, DraftFCB partnered with Shazam to bring QR code functionality to radio, tagging the voices of our interview subjects in the Shazam database and driving to mobile.



RESULTS

Total donated media for the "Stories" campaign exceeded \$500,000 CDN (according to data from Transcontinental, Rogers, Shaw and CBS Outdoor) versus previous annual levels of no more than \$25,000 CDN, according to PFLAG Canada data. In short, media donations were 1900% higher than in any previous comparable period, igniting the extended community to get involved and donate time, further enriching the PFLAG family.

Along with using innovation to generate media donations, the important achievement of driving awareness for PFLAG was also realized with 78 million impressions, more than 30,000 video views, and ArciGay, a European ally of PFLAG that adapted the campaign to help spread support across the globe. Interestingly, 32% of scans came from TV, second only to OOH with 54% of scans, according to Shazam post reporting data. For radio, while more a proof-of-concept, we still averaged 23 tags each time a spot aired with a single short flight.

The combination of mobile, multimedia QR codes and Shazam attracted media attention in Canada, the United States and beyond. The TED Talks' "Ideas Worth Sharing," Mobile Marketer, and La Repubblica Sera, to name a few, covered the campaign, further enhancing our donated media with organic media coverage. The campaign's results have been recognized at the American 2013 Effie Awards For Advertising Effectiveness, the 2012 Cassies, and the Canadian Marketing Association's 2012 CMA Awards. Its technical and creative innovations have been recognized with medals at the Cannes Advertising Festival, the London International Awards, and other festivals (Figure 7).

CONCLUSION

The PFLAG "Stories" campaign achieved remarkable results because of several factors. Firstly, it employed content that was compelling, relevant and deeply personal. Secondly, it distributed that content using that most personal of media, mobile. And finally, it employed a strategy of connectivity between mass media and mobile, coupled with innovation, that

drove not only the engagement of our audience, but of the media channels that enabled those conversations.

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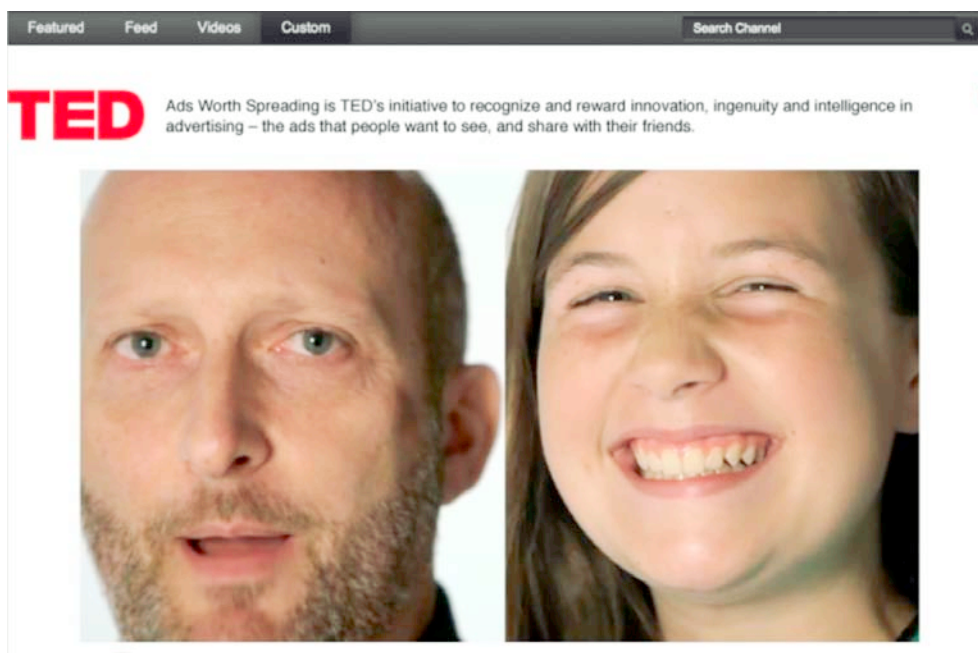
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Figure 7: The PFLAG "Stories" campaign was shortlisted for the TED Talks "Ideas Worth Spreading."



MOBILE MARKETING AND THE VALUE OF CUSTOMER ANALYTICS

Cameron Dow

Abstract:

Mobile marketing and commerce is gaining prominence in Canada, but companies that do not understand the needs and preferences of their customers risk alienating them in this highly intimate medium. Analytics helps marketers increase their knowledge of the customer, enabling improved personalization of marketing to help build trust with the customer, which is important to the success of mobile marketing. It also assists in breaking through marketing barriers with location-based, hyper-personal marketing that is best able to reach the customer and be impactful. As the promise of the mobile wallet is becoming a reality, by owning the payment and shopping channels, businesses can garner extensive customer insight and turn around to sell them product the company knows they are likely to buy based on previous behaviour.

Keywords: *customer analytics, customer intelligence, location-based marketing, hyper-personal marketing, hyper-relevant marketing*

INTRODUCTION

It is often the first thing we look at in the morning and the last thing at night. Our mobile devices have become arguably the most relied upon item we own, and for many people the thought of losing it is terrifying. As the only communications medium many of us carry with us all day, the mobile device is a powerful tool for marketers looking to break through advertising noise and get their message heard.

By 2014, mobile is expected to overtake desktop Internet usage globally, according to Morgan Stanley Research (Morgan Stanley Research, 2010). This is good news for marketers as mobile presents great power to learn more about customers and to in turn provide relevant, personalized marketing, product and service information, and offers wherever they are.

Mobile devices enable real-time, on-the-go access to useful tools such as email, banking, driving directions, flash sales, competitive price checks, movie times, Twitter feeds, and more. This has

profound implications for marketers as with every click, consumers provide information on their interests, preferences, usage, and their connections to the outer world. The key to unlocking this valuable insight is customer analytics, which can assist marketers in developing more successful, personalized offers, pinpoint where customers are for location-based promotions, and link banking and shopping tools for seamless mobile payments.

INCREASE KNOWLEDGE, IMPROVE PERSONALIZATION

As consumers increase their use of mobile, marketers using customer analytics can learn more about what they search for online, how frequently and for how long they stay on a site, and what content they consume.

This knowledge gain is further enabled by customers downloading apps, which have become one of the best known features of smartphones thanks to the libraries of millions of options that help consumers stay informed, entertained, and

connected at the touch of a button. Another benefit of apps to marketers is that they require registration to download, thus overcoming the challenge marketers face of growing consumer unwillingness to sign into the PC-driven web, which limits their ability to gain customer insight and deliver promotions.

By cross-referencing what we know about a customer online and from their app downloads with what we know of them offline, we can paint a more complete 360-degree view of their preferences and behaviours. From this we can create more informed next best offer decisions and infer insights on their current and future likely interests.

BREAKING THROUGH MARKETING BARRIERS WITH LOCATION-BASED, HYPER-PERSONAL MARKETING

Perhaps the most revolutionary aspect of mobile to marketers is that it makes location-based marketing possible. When combined with the ability to gain insight into customers for personalized offers, this provides never before heard of potential to create hyper-personal marketing and change the way a company can engage with a customer. Companies have the opportunity to connect the right message at the right place at the right time and get customers to take an action and buy your product – send them a coupon offer right before they go into the store or even provide the latest product and service information just as they are looking at that same product or service.

For example, a national restaurant chain wants its marketing to not only target a certain demographic at a certain time on a specific day, but it only wants to target a specific geographic location. With location-based marketing the company can pick a location on a map and draw a circle around it. If the user fits all the other criteria and walks into that circle, he or she will get an offer from the restaurant chain.

Customer analytics combined with mobile can do more than just help a company target based on geography, it can also layer in things like walk-time constraints into the campaign to ensure only people who can actually use the offer receive it. For example, say a customer received the above-mentioned offer from the restaurant chain, but could not get there because there is a highway or river blocking their access. Well, this may have become a bad marketing experience that could sour the relationship with that customer moving forward. But, if the company had built in a filter that recognized these constraints and therefore did not send the customer the offer, the relationship would be unharmed.

Location-based advertising has great potential, but many advertisers are not quite ready to explore the full potential today. Analytics have long been used for precise targeting, but for mobile there is definitely a maturity curve. However, a marketer might have already generated a list of offers an individual is eligible for doing marketing optimization and is just waiting for some signal to tell them they are ready to be served, and a customer on the list popping into the location where the offer is available may be that signal. Under this model the marketer would run batch analysis to figure out the optimal offers and then wait for a signal to deliver them. Over time as marketers become more accustomed to mobile marketing this will evolve into more of a real-time, adaptive learning model where location and content are constantly being re-evaluated to determine what the next best offer should be.

THE NEXT FRONTIER: THE MOBILE WALLET

As consumers become increasingly reliant on their mobile devices, the promise of the mobile wallet grows. On the cusp of acceptance and availability for much of the last decade, the mobile wallet is possibly the ultimate platform of

convenience on convergence for mobile. From telcos, retailers, banks, payment networks (AMEX, MasterCard and VISA), to new media providers such as Facebook and Google, companies are exploring how to be successful with this emerging technology. Understandably so, as it promises rich customer insight, share of mind and share of wallet. By owning the payment and shopping channels (and for the telcos the content distribution channel), businesses can garner extensive customer insight and turn around to sell them product the company knows they are likely to buy based on previous behaviour.

TWO KEYS TO SUCCESS IN MOBILE MARKETING: TRUST AND SEAMLESSNESS

Building a trusting relationship with customers is key to the success of mobile marketing. Mobile devices have become a much more intimate part of the consumers' lives than PCs will ever be. As most consumers today take their mobile devices everywhere with them, it is usually within arms-reach, it acts as their life-line to the outside world and it holds personal effects such as photos, music, phone book and apps that make life easier. As a result, the transactions we have on our mobile devices are seen as more personal and marketers have to respect this every time they interact with customers using this medium. It also enables us to have one-to-one conversations and build more meaningful relationships with consumers. The result? You have to treat your customer as a partner in that conversation. You as a seller and app provider have a chance to get to know who that customer on that phone screen is, but you also have to know they will want something more than just your goods or service in return to give you the details of who they are.

This means listening to what they are telling you to develop personalized marketing based on their preferences, including when they want to be

contacted, how frequently, and with what type of message. A recent study conducted by Leger Marketing (2012) for SAS Canada found that 60% of Canadians say they would like to receive more personalized marketing, which is great news for marketers who personalize well. But, at the same time, consumers have become very discerning and half of respondents in the survey also said they have stopped doing business with companies as a result of poor marketing experiences.

The second key to success in mobile marketing is seamlessness. The fewer steps a customer has to take, the easier and more compelling it is to engage, the less distraction there is from customer intent in the process, the better and more sustained the relationship will be. For example, Amazon.com is known for its ability to deliver a personalized shopping experience with a one-click purchase process, which has resulted in customers trusting the site and being more likely to store their credit card information with the company.

Mobile is an exciting opportunity for marketers – that is clear. It should be looked at as a part of any company's multi-channel marketing strategy. What it should not be mistaken for is just a push channel used to distribute generic text messages and offers. Generic messages rarely work in PC-based direct marketing, and with the customer's increased intimacy on mobile they surely will not work in this medium. The wise marketer will realize that mobile enables us to build long-term, trusting relationships with customers based on personalization and an understanding of their behaviours and preferences. We have the opportunity to reach customers throughout their daily lives with content that capitalizes on these insights to create real-time offers, product and service information and much more reaching them in live channels to drive exceptional customer experiences. The spoils of this new world of marketing will be realized by the

innovative leaders that embrace customer analytics and the mobile channel to win the minds and wallets of customers with hyper-relevant, personalized communications.

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TEXT MESSAGING EXPANDS MARKETING REACH OF CANADIAN CHARITIES

David Farnes

INTRODUCTION

Since its launch late in 2009, the Mobile Giving Foundation Canada (MGFC) has helped charities raise close to \$1.5 million, an impressive result given that funds are raised from individual \$5 and \$10 text donations. While the focus of MGFC has been and continues to be on fundraising, new initiatives are being introduced to not only raise more funds, but to also improve donor engagement and raise awareness of the numerous causes Canadian charities support.

In September 2012, MGFC in collaboration with the United Nations World Food Programme (WFP) announced that donors could make a monthly recurring donation of \$5 via text message to help feed a hungry child for a month. WFP, the largest humanitarian agency fighting hunger worldwide, was the first of the charities registered with MGFC to implement this monthly recurring gift option. Now, more than 20 charities are taking advantage of this recurring gift option, which yields an average opt-in rate of 6%.

In April 2013, with the cooperation of the mobile operators, MGFC introduced \$20 and \$25 one-time donations, which are expected to significantly increase total funds raised. Indeed, in surveys conducted by the Canadian Wireless Telecommunications Association, 92% of previous and “interested” donors would give \$10 or more. In fact, 73% would give \$20 or more, and 27% would give \$50 or more (CTWA, 2012).

As with all donations made through MGFC, the amount donated by text is charged to the donor's wireless phone bill, and is billed as a tax-exempt

transaction. The wireless carriers then remit 100% of the funds collected from mobile donations to MGFC, who in turn remits 100% of this amount directly to the registered charity.

In April 2013, with the cooperation of the mobile operators, MGFC introduced \$20 and \$25 one-time donations, which are expected to significantly increase total funds raised.

Canadian charities are clearly excited about the increased mobile options to raise funds; however, they have also requested that enhancements be made to improve engagement with donors, enhancements that will provide an opportunity for charities to cultivate a relationship with donors that began with a simple text message in response to a call for action. One of these enhancements involves a flexible “fifth message” to donors following a donation. This fifth message can be used to send the donor a link to a video, website, digital image or social media feed. Charities can craft their own personal message to further engage and steward mobile donors.

The Canadian Cancer Society recently took advantage of the fifth message in its *Text FIGHT to 45678 to Donate \$5 daffodil* campaign. After completing the \$5 text donation, donors were given the opportunity in a follow-up message to provide a

mailing address in a mobile form in order to receive a daffodil pin in the mail as a thank you for making the donation (Figure 1). The form also provides an opportunity for the donor to consent to receiving email communication from the Canadian Cancer Society.

Figure 1: Thank you screen from Canadian Cancer Society daffodil campaign



Thank you for joining the fight! To get your daffodil pin please fill in the form below.

*First Name

*Last Name

*Street#

*Street Address

*City

Province

Instead of sending a physical thank you gift in the mail, charities can also send digital content. In the United States, the Tiger Woods Foundation creatively sent donors an autographed digital photo of Tiger Woods as a thank you. Charities can also give donors an opportunity to subscribe to receive ongoing alert messages regarding further awareness campaigns, notice of campaign results, news about the charitable work being done, or other ways that donors can help the cause.

Donors appear ready for these new initiatives. According to a CWTA survey, in terms of follow-up from charities, previous and potential donors were most interested in receiving a report on how the donations are being put to use (58%), directions or reminders to obtain a receipt (56%) and a tally of funds raised (53%) (CTWA, 2012).

Charities are also keenly interested in being able to turn a text conversation into a voice conversation with donors. MGFC will be responding by allowing charities to send a follow-up message to donors asking if they would like to receive a call from the charity. Donors must respond with the word CALL to provide their consent. This was one of the top requests MGFC has received from charities, and is to be available by the end of April 2013.

The wireless industry and the MGFC continue to innovate in the philanthropic space. Building on the successful implementation of recurring donations in 2012, expanded donation price points and new options for on-going post-donation dialogue with donors will equip charities with new and innovative options to engage Canadians about their causes and raise awareness and dollars in support of their worthy objectives.

The author wishes to acknowledge the assistance of Katherine Winchester, administrator of MGFC, in supplying current metrics.

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International Journal of
Mobile Marketing
An Official Publication of the Mobile Marketing Association