AN OFFER THEY CANNOT REFUSE: A Behavioural Approach to Stimulating Consumer Demand for Innovations in the Telecommunications Sector

YERMEKBAYEVA, DAYANA

AN OFFER THEY CANNOT REFUSE:

A Behavioural Approach to Stimulating Consumer Demand for Innovations in the Telecommunications Sector

DAYANA YERMEKBAYEVA

Thesis submitted in fulfilment of the degree of Doctor in Business Administration

Durham Business School

Durham University

NOVEMBER 2011

ABSTRACT

Mobile advertising (m-advertising) is one of the most exciting new research areas in the marketing field. The personal, always-on and always-at-hand nature of a mobile phone, its interactive features, combined with its near universal ubiquity give the mobile device unrivalled potential as an advertising platform. In addition, mobile phone operators are uniquely positioned to further enhance its potential- their real-time access to customers' demographic, geographic and historical data enables them not only to help retailers establish a strong electronic presence but also to allow them to customise advertising content to target specific people in specific situations. With the growing awareness of these advantages, retailers are increasingly looking to integrate m-advertising into their marketing communications. However, turning a mobile phone into an effective advertising medium poses a formidable challenge as prior consumer permission is a legal prerequisite for m-advertising practices. It is apparent that to fully embrace the potential of m-advertising, retailers need to identify the precise factors that influence consumer opt-in choice.

This thesis is unique in investigating factors influencing consumer opt-in choice with the ultimate purpose of developing an effective solution to reliably stimulate opt-ins. To this end, it adopts a radical behaviourist perspective, applying a Behavioural Perspective Model (BPM) in order to explore the influence of both contextual and consumer-related factors, account for their interactive effects and, most importantly, focus on the actual opt-in choice rather than the pre-behavioural variables of "willingness" and "intention" commonly used in previous m-advertising studies. Additionally, accounting for the fact that m-advertising is a relatively new service, this thesis integrates consumer innovativeness variable into the BPM and explores its respective influence on the opt-in choice.

The thesis builds upon three consecutive empirical projects, each having its own objective: *Project One* conducts a preliminary exploratory investigation of the opt-in phenomenon; *Project Two* measures the factors identified systematically; and *Project Three* experimentally tests the instrument developed. Overall, the results of this investigation suggest that consumer opt-in choice is largely contingency-shaped and is affected by numerous contextual variables. In particular, among the BPM components, consumers' past experience with m-advertising and/or m-advertisers, utilitarian benefits associated with m-advertising and its content characteristics are the three most important opt-in choice determinants. Of particular significance is the consumer situation, which has been proven to greatly affect opt-in likelihood. The importance of the newly incorporated innovativeness factor is two-fold. First, it functions as one of the strongest direct predictors of the opt-in choice. Second, it serves in a moderating capacity, further amplifying the positive effects of other choice antecedents in the BPM. On this basis, it is concluded that the opt-in choice is amenable to the behaviourist explanation and that in new service contexts the innovativeness factor further contributes to the BPM's predictive capacity.

Key words: Electronic advertising, Mobile advertising, Innovation adoption, New service adoption, Consumer choice, Consumer opt-in, Behaviourism, Behavioural perspective, the BPM

Table of Contents

List of Figures

List of Tables

ACKNOWLEDGEMENTS

First and foremost I want to thank my supervisor, Dr. Sarah Xiao of the continuous vigorous support for my DBA research. Her enthusiasm for the subject was contagious and motivated me greatly even during the toughest periods of my study. Sarah has been my inspiration and an excellent example to look up to as an expert in behavioural science. I cannot thank her enough for guiding me throughout the writing of this thesis, for her invaluable advices and comments, for her patience and great effort in explaining the key concepts to me in the beginning of the process, and for motivating me to pursue conference and publication towards the end of the research journey. A very special thanks to Sarah for suggesting I focused on mobile advertising rather than on mobile phones in our first meeting. This change of direction has made my research a very pleasant and exciting experience. Without Sarah's support this thesis would not have been possible.

I am also indebted to Dr, Mike Nicholson for introducing me to the world of behaviourism. His lectures on behaviourism were one of the most inspiring I have had the privilege to listen to and without this inspiration there would not have been a behavioural thesis to read. I would also like to thank him for his kind concern, valued critical insight, ever encouraging comments and continuous support throughout the thesis period.

A big thank you to my teachers and friends in Kazakhstan who went out of their ways to find facilities for the experiment and helped me with translating English scales into Russian.

Special thanks to my DBA colleagues for their cheerful support, stimulating discussions and all the fun we had at our meetings which made my time in Durham a pleasant memory.

My eternal gratitude goes to my family for their understanding, steadfast encouragement, constant and patient support through this process and for assisting me in every matter throughout the research. To them I dedicate this thesis.

To my family

CHAPTER ONE

OPENING THE FRONTIER OF THE M-ADVERTISING POTENTIAL

1. Introduction

If survival was solely dependent on size and age dinosaurs would still be confidently walking the Earth. In reality, to survive in a constantly changing environment, organisms need to adapt. From an evolutionary perspective, the principle of adaptability is as applicable to industries as it is to biological species. The past several decades have been marked by an important environmental change – an emergence of a new generation of consumers who are less loyal, less interested, more empowered and more difficult to reach than their predecessors (Heinonen & Strandvik, 2007; Lewis & Bridger, 2001; Windham & Orton, 2000).

Following this evolutionary logic, organisations now need to re-assess their communication approaches and employ new strategies to attract and maintain the interest of consumers. In particular, as broadcast media, on which marketing has heavily relied, is no longer sufficient for achieving this objective, the focus should now be on media platforms that are interactive and personalised (Constantinides, 2006; Heller, 2006; McKenna, 1995; Ranchhod, 2007).

The importance of these two media features – interactivity and personalisation – has been repeatedly emphasised within the marketing literature, the argument being that the long established 4Ps framework needs to be adapted to the market of the 21st century (e.g. Constantinides, 2006; Duncan & Moriarty, 1998; Figge & Schrott, 2003; Goldsmiths, 1999; Vesanen, 2007). Specifically, the marketing mix concept needs to be revisited to account for personalisation (Constantinides, 2006; Goldsmiths, 1999); and its promotional element needs to be re-defined as interactive (Duncan & Moriarty, 1998).

Against this backdrop, mobile advertising (m-advertising) is becoming an increasingly attractive option for organisations (e.g. Friedrich, Gröne, Hölbling, & Peterson, 2009; Jayawardhena, Kuckertz, Karjaluoto, & Kautonen, 2009; Okazaki & Taylor, 2008; Pura, 2005). There are several unique characteristics of the mobile platform that give it strong appeal.

Firstly, the mobile phone is high on both *reach*[1] and *richness*[2] dimensions (Jelassi & Enders, 2006; Kavassalis et al., 2003). High penetration rates (Barwise & Strong, 2002; Bauer, Barnes, Reichardt, & Neumann, 2005; Friedrich et al., 2009; Jayawardhena et al., 2009; Jelassi & Enders, 2006; Leek & Christodoulides, 2009; Mort & Drennan, 2007; Shankar, Venkatesh, Hofacker, & Naik, 2010; Xu, 2006-2007) along with the fact that the mobile phone is almost always switched on and constantly with the user (Balasubramanian, Peterson, & Jarvenpaa, 2002; Barnes, 2002; Bauer et al., 2005; Friedrich et al., 2009; Jelassi & Enders, 2006; Laszlo, 2009; Perlado & Barwise, 2004; Shankar et al., 2010; Tsang, Ho, & Liang, 2004) have indicated the high *reach* potential of this medium. As far as *richness* is concerned, it is being enabled and constantly improved through technological advances and the creation of new functionalities (Friedrich et al., 2009; Laszlo, 2009).

Secondly, the mobile phone can offer *personalised* solutions to marketers. Through mobile operators, advertisers can gain access to user-specific information (e.g. demographics of users, personal interests and types of models owned); and therefore use this to address each user individually by customising their services (Barnes & Scornavacca, 2004; Haghirian, Madlberger, & Tanuskova, 2005; Jelassi & Enders, 2006; Salo & Tähtinen, 2005; Xu, 2006-2007). Besides the basic type of preference-based customisation, personalisation can also be feedback-based, which can enable companies to learn from customer reactions and improve their services accordingly (Haghirian et al., 2005), and location-based, which enables location- and time-sensitive advertising (Barnes, 2002; Choi, Song, & Kim, 2007; Figge, 2004; Haghirian et al., 2005; Jayawardhena et al., 2009; Kavassalis et al., 2003; Laszlo, 2009; Lee & Jun, 2007; Perlado & Barwise, 2004; Pura, 2005; Rettie & Brum, 2001; Salo & Tähtinen, 2005; Sharma, Herzog, & Melfi, 2008).

Thirdly, the mobile can enable real-time *interactive* communication with consumer audiences (Barwise & Strong, 2002; Bauer et al., 2005; Haghirian et al., 2005; Kavassalis et al., 2003; Lee & Jun, 2007; Perlado & Barwise, 2004; Rettie & Brum, 2001; Salo & Tähtinen, 2005; Shankar et al., 2010). Such interactivity has many strategic advantages. For example, by successfully integrating the mobile channel into their communication strategies, marketers can turn old inflexible media into interactive media (Laszlo, 2009; Salo & Tähtinen, 2005; Sharma et al., 2008) and maintain ongoing dialogue with consumers (Pura, 2002, p.300). Another advantage of interactivity is its viral marketing potential. Customers can immediately forward commercial information they receive through mobile devices to others (Bauer et al.,

[1] Reach is a function of how easily customers can be contacted through a given medium

[2] Richness is: (1) bandwidth, i.e. the amount of information that can be moved from a sender to a receiver in a given time, (2) the degree of individual customisation of the information, and (3) interactivity, that is the possibility to communicate bi-directionally *(Jelassi & Enders, 2006, p.42)*

2005; Okazaki, 2008, 2009; Palka, Pousttchi, & Wiedemann, 2009; Salo & Tähtinen, 2005; Sharma et al., 2008; Trappey III & Woodside, 2005), thereby extending the reach of the mobile medium.

Finally, the mobile medium surpasses other channels in its ability to target only *intended audiences*. Due to its personal nature, mobile phones are not usually shared with other people (Bauer et al., 2005; Perlado & Barwise, 2004; Shankar et al., 2010; Sharma et al., 2008). This distinguishes it advantageously from other media channels, which are often used collectively (Sharma et al., 2008). For this reason, the mobile phone has often been regarded as having the best targeting capability amongst existing media platforms (Laszlo, 2009); and the highest marketing potential amongst the newly emerged media platforms (Friedrich et al., 2009).

Not surprisingly, expectations about the future growth of this medium are correspondingly high. According to research conducted by Strategy Analytics (2010), the global organisational spend on m-advertising will increase from US$3.6 billion in 2009 to US$38 billion in 2015. Given these large numbers, the mobile is expected to eventually become the fastest growing advertising channel (Leek & Christodoulides, 2009, p.44).

In addition to the unique advantages of the mobile medium, there have also been several evidence-based indicators related to the potential of m-advertising in both empirical studies and business cases. Academic studies have reported that m-advertising has proven efficient in producing high response rates (Barwise & Strong, 2002; Jelassi & Enders, 2006; Kavassalis et al., 2003; Okazaki, Katsukura, & Nishiyama, 2007; Rettie, Grandcolas, & Deakins, 2005; Trappey III & Woodside, 2005); improving brand attitudes (Barwise & Strong, 2002; Rettie et al., 2005); increasing brand name recall (Kavassalis et al., 2003; Rettie et al., 2005) and increasing purchase intentions (Barnes & Scornavacca, 2004; Kavassalis et al., 2003; Rettie et al., 2005). As for the real-life examples, there has been evidence of the successful operation of ad-funded businesses such as Blyk in the UK and iMode portal in Japan (e.g. Baldi & Thaung, 2002; Ferris, 2007; Okazaki, 2008; Okazaki, 2009; Okazaki et al., 2007; Sharma et al., 2008).

Although the above mentioned evidence has suggested that the industry should be experiencing strong growth, there are several barriers to growth which the industry has yet to overcome (e.g. Friedrich et al., 2009; Jayawardhena et al., 2009; Karjaluoto, Jayawardhena, Kuckertz, & Kautonen, 2008; Salo & Tähtinen, 2005).

Firstly, on the supply side, there is a lack of experience amongst different organisations. As Friedrich et al. (2009, p.54) articulated, "*the mobile channel growth as a marketing and advertising vehicle has been so fast that some of the world's most sophisticated marketers*

have yet to determine how to fully embrace it – not for lack of desire, but for lack of experience". This lack of experience makes such organisations either hesitate to take on initiatives for fear that consumers will perceive m-advertising as spam (e.g. Jayawardhena et al., 2009; Karjaluoto, Jayawardhena, et al., 2008); or rush to use m-advertising with the result of incorrect execution (e.g. Salo & Tähtinen, 2005). Both practices are equally damaging to industry growth. Hesitation due to fear of rejection can impede the progress of experience accumulation and can thus negatively affect the development of the industry. As far the other extremes are concerned, Salo and Tahtinen (2005) provided an illustrative example of uninformed m-advertising practices amongst 12 different companies. They monitored the m-advertising practices of such companies and reported that none of them were able to utilise the mobile channel effectively. Rather than making use of the personalisation and interactivity advantages of the mobile medium, companies followed a blueprint for traditional media advertising and used this merely for mass message broadcasting (Salo & Tähtinen, 2005).

Secondly, with regards to the demand side, according to the EU regulation, *"direct marketing may only be allowed in respect of subscribers who have given their prior consent"* (c.f. Cleff, 2007a; Cleff, 2007b; Directive2002/58/EC, art. 13(1)). Therefore turning a mobile phone into an effective advertising medium poses a formidable challenge for advertisers. Being fully empowered to control the flow of promotional information, and to opt-out at any time, consumers are not merely passive information receivers but are active decision makers. Therefore, in this sector, unlike many others, initial acceptance of m-advertising and further continued use of this service by consumers should be seen as the main prerequisite to success. However, this task is complicated by the fact that consumers often tend to perceive m-advertising as an intrusion and thus remain unwelcoming to m-advertising initiates (e.g. Bamba & Barnes, 2007; Carroll, Barnes, Scornavacca, & Fletcher, 2007; Kolsaker & Drakatos, 2009). It is apparent therefore that for retailers wishing to fully embrace the potential of m-advertising, overcoming this non-acceptance barrier should be placed first on their list of priorities.

Although both issues – the lack of experience amongst advertisers on the supply side and the resistance of consumers to opt-in on the demand side – are undoubtedly important, at this early stage of the industry development, the task of maximising the subscriber base should be prioritised over the task of practice improvement. In the absence of a large subscriber base, any m-advertising campaign, regardless of how well it is executed, will eventually fail; and unless this opt-in barrier is overcome, organisations will be unable to harness the full potential of m-advertising (e.g. Bauer et al., 2005; Haghirian et al., 2005; Perlado & Barwise, 2004).

With consumer opt-in choice being considered the first priority, the question that guides the present research is the following:

RQ: *How can organisations stimulate consumers' opt-ins for m-advertising?*

This chapter is organised as follows. *Section 2* provides a definition for m-advertising. *Section 3* describes various forms of m-advertising. *Section 4* reviews previous studies into consumer opt-in behaviour in the m-advertising context and identifies existing gaps in the m-advertising literature. *Section 5* proposes and briefly explains the new behavioural perspective adopted for this research. *Section 6* formulates research objectives, gives an overview of the undertaken research projects and outlines chosen methods of enquiry. *Section 7* concludes the chapter by summarising the main objectives of the research, discusses potential practical and theoretical research contributions, and outlines the structure of the thesis.

2. Definition of M-advertising

Salo and Tahtinen (2005) explained an element of ambiguity surrounding the term "m-advertising":

"*M-advertising or wireless advertising has two different meanings in marketing literature. First, the term refers to advertisements that move from place to place. Buses, trucks, trains, trams, and taxis provide ideal settings for this type of m-advertising.[…]. Second, m-advertising refers to adverts sent to and received on mobile devices (i.e., cellular phones, Personal Digital Assistants (PDAs), and other handheld devices that people carry with them)"* (Salo & Tähtinen, 2005, p.140).

This thesis focuses exclusively on the second meaning of the term. Furthermore, considering that among various handheld devices, the mobile phone has the greatest potential as a media platform (e.g. Eastwood, 2009) and that in practice, the market for m-advertising lies primarily in the mobile phone rather than other devices (Laszlo, 2009, p.29), the thesis only concentrates on advertising via mobile phones. Therefore, the following definition of m-advertising has been adopted:

"M-advertising refers to the transmission of advertising information via mobile phones"

3. Forms of M-advertising

M-advertising is usually categorised into push (sent out to users) and pull (requested by users) types (e.g. Barnes, 2002; Jelassi & Enders, 2006). However, given recent technological

developments and the emergence of many new methods to advertise via mobile phones, it is necessary to categorise m-advertising by its format types.

Generally, m-advertising is delivered in seven different formats (**Figure 1**).

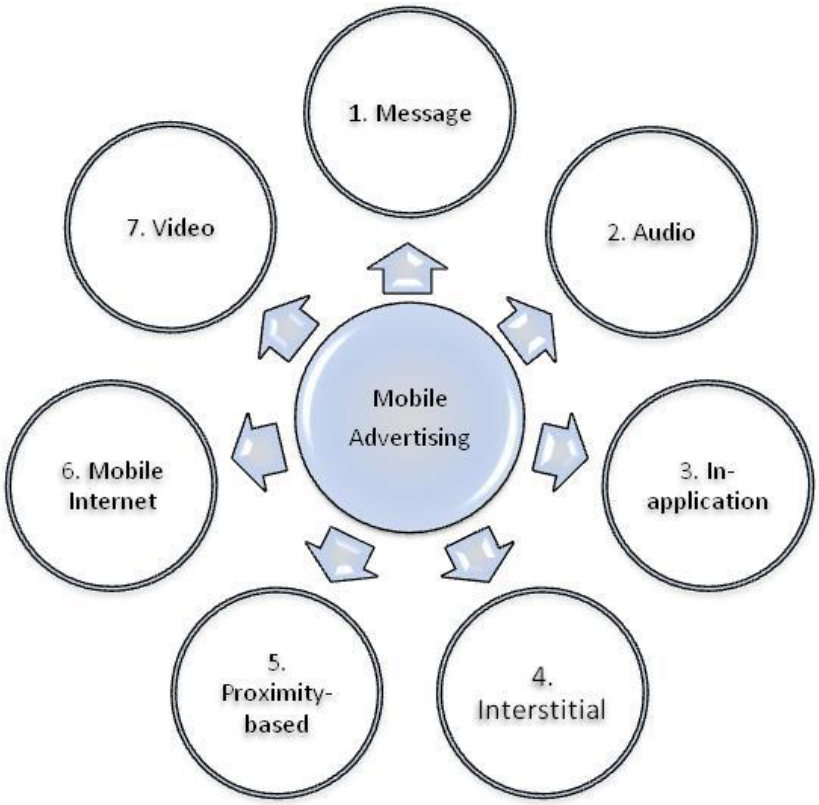


Figure 1: M-advertising formats

Firstly, one of the most frequently used formats is message-based. This includes SMS messages, graphical MMS messages and mobile e-mail messaging. Message-based m-advertisements are commonly used for sending out offers and invitations as well as for mobile couponing and customer relationship management (e.g. reminders, notifications, etc). Message-based m-advertising can be further subdivided into A2P (advertiser-to-person) and P2P (person-to-person) types. Whereas A2P delivery is a widely known and frequently applied form of message-based m-advertising, P2P is still at the experimental stage of development. Examples of P2P advertising involve referral schemes (e.g. "forward to your friends to each receive a discount"), invitations (e.g. "send an invite to your friends") and the ad-funded messaging service (e.g. sending SMS for free with advertisements included in each message).

Secondly, m-advertisements can be in an audio format. This includes ad-funded radio such as Spotify! (free music by request with occasional advertisement interruptions), voice on-hold advertisements (voice advertisement while on hold) and ad-funded call management services (e.g. the Google voice service which allows storage and transcription of voice calls with occasional audio advertisements).

Third, m-advertisements can be pre-installed into mobile phone applications. Following the recent successful launch of the iPhone, which enables downloading hundreds of applications, this format of m-advertising is currently experiencing the most rapid development (Okazaki & Barwise, 2011). Common examples of in-application advertising include ad-funded games, ad-funded widgets[3] and ad-funded Smartphone and iPhone applications. In-application m-advertisements come in a wide variety of formats. One of the most recent examples are mobile augmented reality applications where users can virtually try on the products they see in store, using their phone cameras (Sharma et al., 2008).

Fourthly, m-advertisements can be interstitial or idle-screen based (e.g. watching an advertisement while waiting for a mobile game to load) (Sharma et al., 2008). This type of advertising makes use of idle screens; a concept similar to voice on-hold type of advertisements. Interstitial advertisements can be textual, graphic and even interactive.

Fifthly, proximity-based m-advertising is enabled via location-based technologies (e.g. pin-pointed places of interest on a mobile GPS map), Bluetooth, and mobile i-Port (e.g. scanning a mobile phone to receive advertising content). The main advantage of this delivery format is geographic and, potentially, a situational relevance of the advertisement content. For example, information about the planned routes of travellers can be read from their train passes when they scan them upon boarding the train and can be subsequently used for sending promotional information about restaurants located near to their destination (Okazaki & Taylor, 2008, p.6).

Sixth, m-advertisements can be WAP-based. This includes search engine advertising, mobile banners (top of screen), mobile posters (bottom of screen), and mobile website advertisements. Just like advertising in the computer-based Internet, mobile WAP advertisements can have a wide variety of forms and can be customised based on the available browsing history of users.

[3] Widgets- small portable online mobile phone applications, such as weather reports, that are stored on the phone's main screen

Finally, m-advertisements can be presented in a video format. This category includes short video advertisements and mobile TV. Video advertisements are often placed on operators' mobile portals to enable free video content viewing (e.g. viewing BBC videos with m-advertising video interruptions).

Most of the above described m-advertising formats are applicable to both push and pull types of m-advertising. For example, video and text message advertisements may be sent out to users to inform them of an on-going promotion (e.g. sale alert, pre-roll video clip) or requested by users themselves (e.g. product information, new movie trailer). As for the mobile internet, although in most cases, users browse and select content themselves, there are also situations where m-advertisements are pushed to them. Large banners which restrain the view of a web page or distracting moving banners are typical examples of push m-advertisements in mobile internet format. Hence, each of the above listed formats supports both push and pull delivery scenarios.

Although the diversity of formats and delivery scenarios are advantageous to advertisers, from such a wide range of m-advertising possibilities, follows a question of which format and delivery method would be the most attractive to potential users. Given that the device is carried by users, and that each option has its own unique features, it would be logical to suggest that the choice of the best format would vary across individual situations. For example, for someone interested in a new film that they have only just heard about, the preferred option would be a pull-type video trailer. Similarly, when in a foreign country, people may prefer pull-type text m-advertisements with useful information, or push-type location-based advertisements where all points of interest within walking distance could be pinpointed on a map. A person in an airport waiting for departure, for instance, would be more likely to be interested in a more interactive format of m-advertising that could help to pass the time (e.g. sponsored game or application). Young people on a trip may want to talk about and share their favourite songs by requesting them via free Spotify! mobile phone radio with push audio m-advertisements. Therefore, the *same* format with the *same* content may be accepted by a user in one situation but rejected in another; and the opt-in choice is therefore a function of the right timing and the right match between the service and situation, rather than a matter of advertising content. In this view, the situational context in which m-advertising is offered to a consumer would appear to be important for this research.

In the light of the above argument, this thesis will explore situational influences on the opt-in choice of consumers and investigate ways in which organisations can alter situations to maximise m-advertising opt-in probability. Specifically, what can an organisation do to make

a subscription offer seem most attractive? Where is the best place to offer the subscription? And when would it be best to approach a potential user? Answers to these questions will clearly contribute to our understanding about how consumer opt-ins in this particular market can be stimulated.

In seeking to understand factors influencing opt-in choices, this thesis will only concentrate on the push-type m-advertising to allow an in-depth investigation. Although consumer behaviour in relation to pull type of m-advertising is no less important, push advertising is of particular *practical* interest. This is because whereas pull-type m-advertising involves users making a choice with regards to m-advertisements on each *separate* occasion, push-type m-advertising can be based on a *subscription* model, where users only make the choice once. Therefore, in situations where promotional information is sent out (i.e. push-based), organisations would have relatively more control over information reach, whilst pull-type m-advertising campaigns can be used irregularly.

Furthermore, this thesis will concentrate purely on several formats of push-type m-advertising: messaging, video and in-application. This is because these three formats are based on the core mobile phone functions and are, therefore, familiar to most users. Advertising based on other technologies such as proximity-based advertisements are relatively new and still remain unfamiliar to the majority of users (Leek & Christodoulides, 2009). Similarly, users cannot be familiar with interstitial advertisements because this particular advertising possibility has only been recently recognised and such practices are only starting to develop (Sharma et al., 2008). With regards to the mobile internet and audio advertising formats, although both formats are also built on the core mobile phone functions, these formats are similar to previously known and widely researched Internet and direct call/on-hold types of advertising, respectively. In the view of this, the selection of the three most widely known, and thus most representative m-advertising formats – messaging, video and in-application – appears to be most reasonable for the purposes of this study.

4. Previous Research

Over the past decade, the m-advertising industry has attracted much academic interest and a number of factors influencing consumer acceptance of m-advertising have resultantly been discovered (e.g. Bauer et al., 2005; Jayawardhena et al., 2009; Karjaluoto, Jayawardhena, et al., 2008; Karjaluoto, Lehto, Leppäniemi, & Jayawardhena, 2008; Kautonen, Karjaluoto, Jayawardhena, & Kuckertz, 2007; Scornavacca & McKenzie, 2007; Tsang et al., 2004). For instance, several studies found that demographic factors such as consumer age and gender to be influential factors in predicting acceptance (Barwise & Strong, 2002; Rettie & Brum,

2001; Rettie et al., 2005). Other research has emphasised the role of consumer attitudes towards m-advertising (Bauer et al., 2005; Muk, 2007a, 2007b; Okazaki, 2004; Tsang et al., 2004; Xu, 2006-2007) and consumer trust (Jayawardhena et al., 2009; Karjaluoto, Jayawardhena, et al., 2008; Kautonen et al., 2007). A number of studies have also emphasised the role of past experiences in consumers' acceptance decisions (Barnes & Scornavacca, 2008; Jayawardhena et al., 2009; Karjaluoto, Jayawardhena, et al., 2008; Kautonen et al., 2007; Koivumaki, Ristola, & Kesti, 2006; Leek & Christodoulides, 2009; Yermekbayeva & Xiao, 2011).

In addition to these consumer-related factors, the literature has indicated the high importance of contextual factors, such as time and user location (Bamba & Barnes, 2007; Barnes & Scornavacca, 2008; Carroll et al., 2007; Merisavo et al., 2007; Pura, 2005; Rettie & Brum, 2001; Yermekbayeva & Xiao, 2011); as well as other external factors, such as social influence (Barnes & Scornavacca, 2008; Leek & Christodoulides, 2009), m-advertising content characteristics (Barnes & Scornavacca, 2008; Leek & Christodoulides, 2009; Peters, Amato, & Hollenbeck, 2007; Xu, 2006-2007; Yermekbayeva & Xiao, 2011) and m-advertising delivery conditions (Bamba & Barnes, 2007; Barwise & Strong, 2002; Carroll et al., 2007; Leek & Christodoulides, 2009; Rettie & Brum, 2001; Tsang et al., 2004; Yermekbayeva & Xiao, 2011).

Despite the increasing interest in the m-advertising area and the undoubted contributions of the previous studies, however, this research field is still in its infancy and a number of important questions still remain unanswered. In particular, given the large variety of potentially influential factors, which factors are worth concentrating on the most and how can advertisers sensibly allocate their effort to effectively influence consumer choice?

This thesis argues that given that some factors such as attitudes and trust are consumer-related and are thus largely uncontrollable to organisations; whilst other factors such as delivery conditions and location context can at least be partially controlled by organisations, it would be logical to categorise the factors based on the *source* of influence (i.e. consumer or organisation) and to prioritise between them accordingly. However, to date, the issue of factor classification has not been adequately addressed in the literature. Although in most of the proposed consumer acceptance models both consumer-related and organisation-related factors have been discussed, the two sets of choice antecedents are frequently mixed together (e.g. Koivumaki et al., 2006; Leek & Christodoulides, 2009; Tsang et al., 2004; Xu, 2006-2007), making it difficult for advertisers to correctly prioritise between these factors. This lack of

clear choice antecedent classification thus complicates the task of stimulating opt-ins and represents a substantial gap in knowledge.

Furthermore, although the two parties involved - consumers and organisations - each have their own separate influence on consumer choice it is important to keep in mind that in real-life situations, consumers are often affected by *both* types of factors *simultaneously*. For example, a consumer choosing whether or not to opt-in for m-advertising in a store may, for instance, be simultaneously influenced by both consumer-related factors, such as their own opinion of that brand, and previous experience with that company; and organisation-related factors, such as a friendly sales assistant, availability of product range, length of queue, product prices and on-going promotions.

In the m-advertising context in particular, such simultaneous influences are especially important because m-advertising is based on a *dialogue* between an advertiser and subscribers. Consumers are involved in the advertising process from the start when they give their permission and actively participate in communication throughout the process (e.g. replying to messages and acting on advertisements).

Taking the importance of the simultaneous influences of consumer- and organisation-related factors into consideration, another question that inevitably arises is – how do all these factors *interact*? Clearly, to make the theory applicable to real-life situations, it is necessary to account for the interplay between consumer- and organisation-related factors. To date, however, m-advertising literature has been lagging behind in this respect, as there are very few studies which explicitly acknowledge and investigate the interaction between the two groups of factors. In the light of the above argument, this limitation represents another knowledge gap.

Additionally, there is an important issue with regards to the focus of the research. The majority of previous studies on consumer choice towards m-advertising have concentrated primarily on the issue of consumer "acceptance" or "adoption" of this service (e.g. Bauer et al., 2005; Jayawardhena et al., 2009; Karjaluoto, Jayawardhena, et al., 2008; Karjaluoto, Lehto, et al., 2008; Kautonen et al., 2007; Peters et al., 2007; Tsang et al., 2004; Xu, 2006-2007). However, although acceptance can benefit organisations in the short run, what matters the most is continued use of m-advertising capable of bringing long-term benefits. Therefore, this thesis will focus on the term "opt-in" which refers to a committed subscription rather than a one-time permission. The focus of the enquiry is therefore not on temporarily attracting

consumers; but on generating continued interest and maintaining consumer use of m-advertising.

Finally and most importantly, in explaining m-advertising acceptance, the majority of previous studies have either heavily relied on *cognitive* theories of consumer behaviour (Bauer et al., 2005; Karjaluoto, Lehto, et al., 2008; Peters et al., 2007; Tsang et al., 2004; Xu, 2006-2007) or have proposed their *own* sets of influential factors generally identified through exploratory investigations (Barnes & Scornavacca, 2004, 2008; Carroll et al., 2007; Haghirian et al., 2005; Harris, Rettie, & Kwan, 2005; Jayawardhena et al., 2009; Karjaluoto, Jayawardhena, et al., 2008; Kautonen et al., 2007; Krishnamurthy, 2001; Leek & Christodoulides, 2009; Merisavo et al., 2007; Mort & Drennan, 2007; Okazaki, 2004; Pura, 2005; Rettie & Brum, 2001; Trappey III & Woodside, 2005). Following the cognitive logic, previous inquiries have mainly focused on *pre*-behavioural factors, such as consumer intentions or willingness to opt-in, rather than on the *actual* opt-in choice, with only few studies being notable exceptions (Barwise & Strong, 2002; Rettie et al., 2005; Trappey III & Woodside, 2005).

Although these cognitive studies have undoubtedly contributed to our understanding of m-advertising acceptance, it is important to remember that *pre*-behavioural variables such as willingness or intentions cannot always reliably predict actual behaviour (c.f. Bemmaor, 1995; Kalwani & Silk, 1982; Morwitz, 1997; Morwitz & Sun, 2010). To make reliable predictions, it is therefore necessary to shift the focus of enquiry to the *actual* opt-in choice.

To summarise, this thesis will seek to address three gaps in knowledge. Firstly, it seeks to study the opt-in choice antecedents by separating them on the basis of the source of influence in order to enable clear differentiation between controllable and uncontrollable factors. Secondly, it seeks to investigate the interactive influences associated with both groups of factors. Finally, it will narrow the focus of the inquiry to consumer opt-in choices involving long-term commitment, rather than consumer acceptance of m-advertising, and will investigate the actual opt-in choice rather than pre-behavioural variables. The choice of analytical framework to direct the enquiry, which is discussed in the next section, has therefore been determined by these considerations.

5. Analytical Framework

The majority of existing studies on consumer behaviours towards m-advertising have largely relied on cognitive logic (e.g. Bauer et al., 2005; Karjaluoto, Lehto, et al., 2008; Peters et al., 2007; Tsang et al., 2004; Xu, 2006-2007). Based on the assumption that humans are perfectly

rational beings, cognitive theories of choice (Ajzen, 1991; Fishbein & Ajzen, 1975), and their later extensions designed for studying adoption of technology products (Davis, 1989; Venkatesh & Davis, 2000b), have explained human behaviour by reference to inner mental constructs such as inner motivations and desires. Despite the predominant conviction in the completeness of the cognitive explanation, this thesis takes the position of Feyerabend (1993) who advocated "theoretical anarchism" or interplay of competing explanations for objective knowledge. He argued:

"Knowledge so conceived is not a series of self-consistent theories that converges towards an ideal view; it is not a gradual approach to the truth. It is rather an ever increasing ocean of mutually incompatible alternatives, each single theory, each fairy-tale, each myth that is part of the collection forcing the others into greater articulation and all of them contributing, via this process of competition, to the development of our consciousness".

In consistence with this view, this thesis proposes an alternative "behavioural" perspective on consumer opt-in choice. Behaviourism focuses on influencing rather than merely explaining behaviours; and its solution-oriented approach thus directly corresponds to the purpose of the present research.

According to behaviourism, behaviours are determined by the environment in which they occur and by past behaviour contingencies. When applied to the consumer behaviour context, the logic of behaviourism thus allows differentiating between the consumer-related (past contingencies) and organisation-related (environmental context) factors and studying their respective influences systematically. Moreover, its focus on contextual factors, which are largely controlled by organisations, is beneficial for this research because it allows the identification of the precise stimuli that retailers can use to effectively stimulate opt-ins. With regard to the past contingencies, the behaviourist argument which suggests that all behaviours are "contingency-shaped" or directly determined by the history of past behaviours is also deemed advantageous for this research as it provides an additional benefit of being able to maintain the *continued* use of m-advertising.

Although some may oppose the choice of behaviourism on the grounds that it has an almost exclusive focus on external factors whilst disregarding cognitive behaviour antecedents, such as desires and beliefs, contrary to this wide-spread belief, behaviourism has never refuted the existence of such "private events". For example, in his widely-known behaviourist manifesto, the founder of "classical" behaviourism Watson (1913) did not deny the fact that private

events existed, but simply proclaimed them to be irrelevant to the *science* of behaviour. Since science, in his view, should serve the purpose of controlling and changing behaviours, rather than describing and explaining them, uncontrollable "private" factors were to be excluded from consideration on the grounds of insignificance.

Deviating from Watson's (1913) argument, Skinner (1953), the founder of "radical" behaviourism, proposed an alternative form of conditioning whereby he accepted private events as legitimate subjects of inquiry. His interpretation of the private events is however different from that of Watson's or those cognitive theorists. Skinner (1953) stressed that private phenomena are behaviours in their own right, rather than explanatory variables.

Although the views of Watson and Skinner, with respect to private events, are markedly different; neither explicitly denied the existence of private events. Both Watson's complete disregard of private events as legitimate sources of data and Skinner's rejection of private events as *initiators* of behaviour are explained by the fact that they merely focused on the issue opposed from traditional psychology - that is, not the interpretation of human behaviour but its prediction and control.

Moving from general behaviourist terms to a specific model, this thesis will explore the issue of consumer m-advertising opt-in choice from a radical behavioural perspective, through the application of a Behavioural Perspective Model (BPM) (Foxall, 1990, 1997a). Although relatively new, the BPM has an impressive record of successful applications to a wide range of human behaviours, including food consumption (Leek, Maddock, & Foxall, 2000); consumer brand choice (Foxall, Oliveira-Castro, & Schrezenmaier, 2004); consumer product- and brand-switching behaviours (Oliveira-Castro, Foxall, & Schrezenmaier, 2005); multichannel buying (Nicholson, Clarke, & Blakemore, 2002); counterfeit buying (Xiao & Nicholson, 2010) and environmental consumption (Foxall, Oliveira-Castro, James, & Sigurdsson, 2006).

In previous studies, the model has numerously proven to not only provide a comprehensive explanation of consumer behaviour but also to interpret the meaning of behaviour and reliably predict consumer choice (Foxall, 2010). Most importantly, the BPM research programme has succeeded in validating the radical behaviorist account of consumer choice and has provided substantial evidence that radical behaviourism is capable of accurately predicting complex human behaviours (Foxall, 2010, p.106).

The choice of the BPM perfectly coincides with the earlier outlined gaps in knowledge. Firstly, the BPM presents consumer choice as a function of two separate groups of factors- consumer-related (past contingencies) and organisation-related (behaviour context). Secondly, despite being classified into two separate groups, the BPM posits that both types of antecedents only affect consumer choice through constant interaction- i.e. individual factors are shown to be activated by the external environment and elements of the external environment gain meaning due to personal factors (Foxall, 1990, 1997a). Thirdly and most importantly, as a radical behaviourist model, the BPM (Foxall, 1990, 1997a) has its focus on the subject matter- consumer choice, which advantageously distinguishes it from myriad of cognitive models which are mostly concerned with predicting pre-behavioural phenomena. For these three reasons the BPM (Foxall, 1990, 1997a) is considered intrinsically most suitable for the present research and is therefore chosen as its guiding analytical framework.

6. Research Objectives and Methods of Inquiry

The question of how to stimulate consumer opt-ins for m-advertising is approached through fulfilment of two research objectives. Firstly, prior to devising an approach for stimulating opt-ins, it is necessary to identify key choice influencers and measure their respective influences. Therefore, the first objective to be pursued is the identification of factors which influence consumer opt-in choice. Secondly, as argued earlier, in developing a practical approach for stimulating opt-in behaviours it is of critical importance to account for interaction between the two types of factors. Therefore, in consistence with BPM (Foxall, 1990, 1997a) logic, the second objective of this thesis is to model interactive situational influences on opt-in choice and identify the precise situations which are most effective for stimulating opt-ins.

The thesis builds upon three consecutive empirical studies, each having their own objective: *Project I* conducts a preliminary exploratory investigation of the opt-in phenomenon; *Project II* measures the factors identified systematically and explores their combined effects on the opt-in; and *Project III* experimentally tests the instrument developed.

In following this sequential line of enquiry, this thesis adopts an *overlapping* project structure whereby each objective is repeatedly addressed using different methods in order to improve reliability of the findings at each stage of empirical investigation (**Figure 2**).

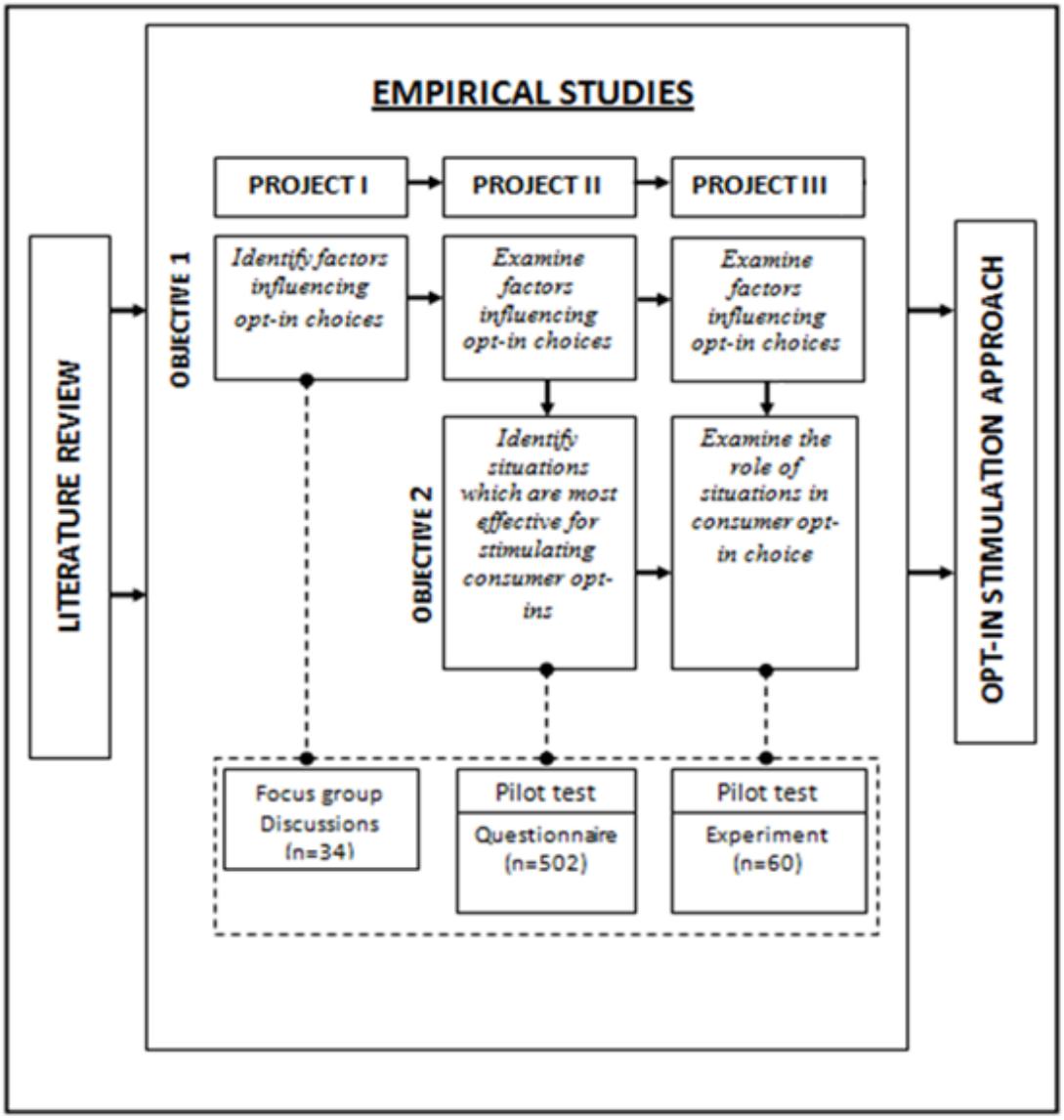


Figure 2: Thesis Structure

7. The Behaviorist Perspective on Opt-in Choice

To summarise, this thesis seeks to develop a method for stimulating consumer opt-in for m-advertising by applying the BPM (Foxall, 1990, 1997a); a radical behaviourist model of consumer choice. The practical rationale for conducting this research lies in the premise that unless the consumer non-acceptance barrier is overcome and unless the use of m-advertising is effectively maintained, retailers will not be able to harness the full potential of the mobile channel. Therefore, by devising a behaviourist solution to the non-opt-in problem, this thesis intends to contribute to managerial practice.

Intended contributions to theory are as follows. Firstly, this thesis seeks to contribute to the literature on consumer behaviour toward m-advertising by offering a novel competing perspective to the m-advertising opt-in issue, existence of which, according to Feyerabend

(1993), is vital for scientific progress. The application of this new perspective will additionally contribute to the earlier identified three knowledge gaps related to inadequate categorisation of opt-in antecedents, lack of attention to their combined influences on choice and insufficient focus on actual opt-in choice. Secondly, this thesis will seek to contribute to the BPM literature by applying it to a new context. In particular, as previous applications of the BPM were conducted in *consumption* contexts, such as retail consumption (Foxall et al., 2004; Oliveira-Castro et al., 2005); multichannel buying (Nicholson et al., 2002); counterfeit buying (Xiao & Nicholson, 2010) and "green" consumption (Foxall et al., 2006), application of the BPM to a *non*-commercial context of m-advertising will serve as a useful contribution to the BPM research programme.

This thesis is organised in the following manner. Firstly, *Chapter 2* provides an overview of the BPM (Foxall, 1990, 1997a), explains each of the model's components and discusses application of the BPM to the m-advertising context. In *Chapters 3-5* this discussion is subsequently followed by a series of three empirical projects. Finally, *Chapter 6* concludes the enquiry by summarising the research findings and discussing the research implications and limitations.

CHAPTER TWO

LITERATURE REVIEW

1. Introduction

This research seeks to develop an operant account of consumer opt-in choice in the m-advertising context, by relating consumer choice to its controlling contingencies and maintaining environmental conditions. The previous chapter provided a background for m-advertising; formulated a question to guide the enquiry; outlined knowledge gaps in the existing literature; proposed an original behavioural intrepretation of the opt-in phenomenon; and set out several research objectives to aid the process of investigation. To summarise, answering the research question "how consumer opt-in choice can be stimulated" will be approached in two consecutive steps: (1) identification of the key determinants of opt-ins and (2) identification of the situations that most effectively stimulate opt-ins.

This chapter seeks to discuss in detail the proposed behavioural interpretation of the opt-in choice and explain how each of the BPM (Foxall, 1990, 1997a) components contributes to the choice prediction. However, since this thesis applies the BPM to the relatively new service context of m-advertising, certain adjustments to the basic research model are necessary. In particular, while analysing only the basic BPM components is deemed sufficient in routine application contexts, where consumers are familiar with the product, then choices related to *new* products certainly require an approach that accounts for the newness of the behaviour. The logic driving this argument is straightforward: given that m-advertising practices appeared relatively recently and especially considering that it was not until now that technological advancement allowed it to realise its potential (i.e. rich content, many formats) (Sharma et al., 2008), this service, in the wide variety of forms that are now available, should be considered as a growing innovation. This is especially true considering that many types of m-advertising still remain unknown to many (Leek & Christodoulides, 2009), which further indicates the overall newness of this phenomenon.

Therefore, this thesis is based on a conviction that m-advertising opt-in behaviour should be analysed an innovative behaviour. This view is also confirmed by previous works on the subject (Bauer et al., 2005; Koivumaki et al., 2006; Muk, 2007a, 2007b; Zhang & Mao, 2008), which investigated m-advertising acceptance from the innovation diffusion (Rogers, 1962, 1995) and the Technology Acceptance Model (Davis, 1989; Davis, Bagozzi, & Warshaw, 1989; Venkatesh, 2000; Venkatesh & Bala, 2008; Venkatesh & Davis, 2000a; Venkatesh,

Morris, Davis, & Davis, 2003). On this basis, this thesis further extends the BPM to include the factor of consumer *innovativeness*, the variable most commonly used to explain innovative consumption choices (e.g. Aldás-Manzano, Lassala-Navarré, Ruiz-Mafé, & Sanz-Blas, 2009; Citrin, Sprott, Silverman, & Stem, 2000; Wang, Dacko, & Gad, 2008).

This chapter is organised as follows. Firstly, in *section 2*, it provides a general background to behaviourism and explains the BPM (Foxall, 1990, 1997a). Secondly, based on studies into consumer behaviour towards m-advertising, *section 3* discusses the application of the BPM's elements in the m-advertising context. Thirdly, moving from the discussion of the separate BPM components to discussing their combined influences on choice, *section 4* introduces the situational element of the BPM (Foxall, 1990, 1997a). Fourth, *section 5* discusses the application of the innovativeness construct within the BPM. Finally, *section 6* summarises the research propositions developed and presents a conceptual model to guide the subsequent empirical research.

2. Behavioural Perspective on Opt-in Choice

Chapter One outlined several deficiencies in the existing knowledge of m-advertising opt-in choice determinants, thereby underlining the need for: (1) separating controllable and uncontrollable choice determinants; (2) accounting for their interrelationships, investigating a committed *opt-in* choice rather than a more generalised m-advertising acceptance; and (3) shifting the focus of inquiry from pre-behavioural variables to the *actual* opt-in choice. The discussion in Chapter One therefore established a base for a comprehensive behavioural reinterpretation of the opt-in choice, which the present research proposes.

This section is organised as follows. It starts by providing a historical and conceptual background to behaviourism and justifies the choice of the behaviourist position for this research by underlining its competence in contributing to the three above-noted knowledge gaps. Then, it outlines the BPM (Foxall, 1990, 1997a), further justifying its relevance to this research, and then specifies ways of applying the BPM in the m-advertising context.

2.1 Background to Behaviourism

Debates about the nature of knowledge of behaviour, both its explicit and implicit aspects, have been going on for centuries (Foxall, 1995c; Hergenhahn, 2005; Overskeid, 1995) dating as far back as the disagreement between Plato and Aristotle on the nature of knowledge (Hergenhahn, 2005). These disagreements are best explained by reference to the subjective-objective distinction. Whereas the subjective position holds that knowledge resides in unobservable private events, such as hoping, liking and intending, and thus can only be

obtained from introspection; the objective stance views knowledge as a "hard" substance and is concerned with gaining knowledge through naturalistic observation of public events (Burrell & Morgan, 1979; Moore, 1995, p.33).

In the nineteenth century and early twentieth century, the subjective (or cognitive) stance was the dominant approach in psychology (Moore, 1995). Believing internal processes caused behaviour, supporters of the subjective stance relied on the attitude-intention-behaviour relationship and sought to explain behaviour by measuring these constructs (Foxall, 1997b, 1999c, 2002b). However, given that the phenomena of interest are private and thus inaccessible to outside observers, application of the subjective approach has been associated with accuracy problems. First, the relationships between attitudes and behaviours are often unreliable because of "literal" and "evaluative" inconsistencies (Ajzen & Fishbein, 2005, p.178). Literal inconsistency stems from the fact that people do not always act in the way that they intend to. Evaluative inconsistencies arise from the failure of cognitive theories to incorporate other potentially important variables into the explanation of behaviour, such as individual differences, situational variables and attitude characteristics (Ajzen & Fishbein, 2005, p.179). Similarly, intentions are not necessarily reliable predictors of behaviour as they may change over time and are often affected by individual bias (Bemmaor, 1995; Kalwani & Silk, 1982; Morwitz, 1997; Morwitz & Sun, 2010).

Consequently, at the turn of the twentieth century, the unreliability of the cognitive approach was increasingly pointed out (Davies, Foxall, & Pallister, 2002; Foxall, 1983, 1997a, 2002b; Hini, Gendall, & Kearns, 1995; Milliman, 1982; Solomon, 1996; Wicker, 1969). This eventually led to its position weakening, and prompted a search for alternative and more reliable accounts of human behaviour (Lecas, 2006, p.392). During this period, Watson (1913) published his well-known behaviourist manifesto, officially marking the birth of behaviourism, the most popular and the most argued upon philosophy of psychology throughout much of the twentieth century (Lecas, 2006; O'Donohue & Kitchener, 1999). The controversy surrounding behaviourism was largely due to its positivist position with regard to knowledge. As O'Donohue and Kitchener (1999, p.10) explain, behaviourism "is not the science itself, but rather the meta-position in which basic questions about what is proper subject matter and how this subject matter should be properly studied are raised". In other words, behaviourism did not merely propose a new approach to solving attitude-intention-behaviour inconsistencies but undermined the very basis of cognitive psychology. Specifically, Watson (1913) called for a shift from *cognitive* psychology, based on introspection, to *objective* psychology, where psychology was to be treated as a branch of

natural science; thus introspection was denied scientific importance, and observable phenomena were regarded as the only legitimate sources of scientific data.

Watsonian classical behaviourism was largely based on the research and methodology of the famous Russian scientist Ivan Petrovich Pavlov who discovered the phenomenon of reflex conditioning. Specifically, Pavlovian conditioning included four elements: an unconditioned stimulus (US), an unconditioned response (UR), a conditioned stimulus (CS), and a conditioned response (CR). In his experiment, dogs were conditioned to salivate (CR) upon hearing a bell (CS) following three simple steps. First, he observed the naturally occurring reaction of a dog to food (US➔UR). Then, a bell was rung (CS) as the dog was presented with food (US). At this stage, as a result of being presented with both stimuli (CS+US), the dog, naturally, continued to produce the same unconditioned response. After a certain period of time, the dog started to salivate (CR) upon hearing the bell (CS) in anticipation of food (US). This behaviour was called a conditioned reflex or the CS➔CR reaction.

In a similar way, Watson's classical conditioning regards human behaviour as a reaction to external events. He formulates human behaviour as an S➔R dependency, where a stimulus elicits a behavioural response. There are many practical examples of how human behaviour is conditioned. For example, advertisers use principles of classical conditioning to shape positive emotions towards certain brands by associating them with images of pleasant scenes (Grossman & Till, 1998; Janiszewski & Warlop, 1993; Skinner, 1953, p.57; Stuart, Shimp, & Engle, 1987), celebrities (Baker, 1999), humour (Duncan, 1984), positive music (Gorn, 1982), and other brands (Grossman, 1997). In the academic world, however, classical conditioning was unpopular; Watsonian behaviourism was widely criticised by his contemporaries for failing to adequately explain the complexity of human behaviour. This eventually brought about the rise of Skinnerian radical behaviourism, marking the beginning of the "second stage" of the behavioural revolution (Moore, 1995).

Although often erroneously attributed to the logical positivism of Watsonian classical behaviourism (the earliest and most extreme form of behaviourism), Skinnerian radical (or operant) behaviourism was very different (Catania, 1984; Day, 1969; Malone & Cruchon, 2001; Morris, 1993; Moxley, 1982; Skinner, 1984). While acknowledging that some human behaviour is caused by a stimulus, Skinner (1953, p.49) criticised early behaviourism for its explanatory inadequacy:

"[...] if we were to assemble all the behaviour which falls into the pattern of the simple reflex, we should have only a very small fraction of the total behaviour of the organism".

One of the major deviations of radical behaviourism from earlier classical behaviourism was the recognition that behaviours are not elicited by a certain stimuli but are *emitted* by past consequences of response (Catania, 1984, p.474). In other words, whereas in classical conditioning, the response is caused by a stimulus, in operant conditioning it is determined by the consequences, or more precisely, the whole chain of functional $S^D \rightarrow R \rightarrow S^{R+/-}$ relationships (Catania, 1984, p.474; Skinner, 1953). In contrast to classical behaviourism, the initiating stimuli within an environment only *signal* the availability of reinforcement to a subject, rather than automatically causing behaviour. Environment thus functions as discriminative stimuli, and positive (reinforcements) and negative (punishments) consequences increase or decrease the probability of behavioural occurrences, respectively. Therefore, the initiating stimuli are called discrimina*tive* stimuli, behavioural responses are seen as discrimina*ted*, and the entire *S*➔R➔S process is called discrimina*tion* (Skinner, 1953).

A simple everyday illustration of operant conditioning would be where a man has been repeatedly rewarded for treating his partner with flowers and sweets. Upon receiving them, the woman would usually start to smile, display happiness and, perhaps, while being in a good mood, even forget about previous minor arguments they might have had. Clearly, this can be classified as a positive consequence (S^{R+}) of the man's behaviour. So, when presented with another opportunity to give flowers to the woman (e.g. a special occasion) (S^D), the man will be likely to do so again (R). Similarly, if a child repeatedly receives positive feedback from his/her parents for receiving good marks at school, a functional relationship is established between good performance (R) and praise (S^{R+}). Consequently, when a teacher asks a question to a class (S^D), that child will raise his/her hand to answer (R).

Another defining characteristic that differentiated Skinnerian behaviourism from that of Watson's was the legitimisation of private events in its accounts of behaviour (Friman, 1998; Moore, 1995). Skinner (1984, p.579) explains:

"The part of behaviourism I rejected was the argument that science must confine itself to events accessible to at least two observers (the position of logical positivism) and that behaviourism was therefore destined to ignore private events".

However, while accepting them as valid phenomena for investigation he proposed a markedly different approach to the study of private events. According to Skinner (1953, 1974, 1984), private events are behaviours in their own right rather than being initiating causes of

behaviour. More specifically, emotions are by-product behavioural responses that co-occur with the actual behaviour and are controlled by the same conditions (Skinner, 1953, 1974).

For example, if a woman was previously robbed in a dark street while walking home alone, the nervousness she experiences on passing the same street at night (emotion) and her observable display of fear (e.g. a fast walking pace) are two separate behaviours conditioned by the same discriminative stimulus (the past behaviour consequence) and will occur simultaneously. Therefore, as Skinner (1974, p.18) explains, radical behaviourism "does not call these events unobservable and does not dismiss them as subjective", as classical behaviourism does, but "simply questions the nature of the object observed and the reliability of the observations".

Notwithstanding the low scientific significance of emotions as antecedent stimuli, emotions can still be used for another important purpose – they help observers "*classify* behaviour with respect to various circumstances which affect its probability" (Skinner, 1953, pp.162-163, emphasis added). Thus, knowing about an emotional state in which a given behaviour occurred helps to identify the conditions that controlled that behaviour. Further, being controlled by the same consequences, emotional and behavioural responses often co-vary. For example, as Skinner (1953, pp.164) explains, when a person is in an angry emotional state, evidence of damage inflicted on an opponent reinforces both the aggressive behaviour *and* the anger. And yet such co-variation may not necessarily occur. Defining emotions as merely *predispositions* to act in certain ways (Skinner, 1953, p.162), Skinner emphasises that emotional states do not *have* to increase the probability of a response; they only have "a kind of second-order probability – the probability that a given circumstance will raise the probability of a given response" (p.169).

Despite making these considerable contributions to science, Skinnerian behaviourism has been misunderstood in many ways and consequently widely attacked on erroneous grounds (Bijou, 1979; Catania, 1984; Day, 1969; Malagodi, 1986; Malone & Cruchon, 2001; Moore, 1995; Moxley, 1982; O'Donohue & Smith, 1992; Skinner, 1984; Todd & Morris, 1983). Inexcusably, even educational books of psychology often present misconstrued interpretations of radical behaviourism (Todd & Morris, 1983). In particular, radical behaviour analysis has been criticised for portraying humans as passive organisms and failing to provide an interpretation of behaviour (Bijou, 1979; Foxall, 1998). Such criticism, as Bijou (1979, p.5) explains, "usually comes from those who believe that theoretical explanations must be couched in terms of hypothetical variables in an unspecified realm (such as the mental life) or must involve presumed physiological (or mostly neurological) processes". In fact, he argues,

"behaviour analysis marches to a different philosophical drumbeat" and provides an adequate interpretation of behaviour by functionally relating behaviour to its determinants (Bijou, 1979, p.5). Regarding the presumed passivity of organisms, this belief is also unfounded, because in radical behaviourism, as opposed to classical behaviourism, organisms are in constant *interaction* with their environment (Bijou, 1979).

Of particular concern is the common belief that Skinnerian behaviourism was merely an extension of classical behaviourism (Bijou, 1979; Malagodi, 1986; Malone & Cruchon, 2001; Moxley, 1982; Todd & Morris, 1983). One factor that contributed to this misattribution was the formulation of the Skinnerian three-term contingency (Moxley, 1982). Specifically, what might have confused Skinner's readers is that despite his main focus being on the R➔$S^{R+/-}$ relationship, the first S in the S➔R➔S representation was in the same position as in earlier versions of behaviourism (Moxley, 1982). Another source of confusion could have been the use of S and R terms, the terms that normally express linear causal relationships, in Skinner's explanation of a three-way relationship (Moxley, 1982). In fact, Skinner himself did not express these relationships in the exact S➔R➔S form; instead, he provided more detailed graphical and, in later works, verbal explanations of these functional relationships (Moxley, 1982).

Whatever the reasons for the misinterpretations of Skinner's work, he has eventually become "the most honoured and the most maligned, the most widely recognised and the most misrepresented, the most cited and the most misunderstood [...] of all contemporary psychologists" (Catania, 1984, p.473). These misunderstandings and the shallow interpretations of Skinnerian behaviourism are now named as the main reasons why psychology failed to fully appreciate his research and the contributions of his numerous discoveries (Malagodi, 1986). Misunderstanding continued to spread with the famous Chomsky's review (1959) of Skinner's work. Chomsky's misinformed and yet virtuously performed destructive criticism of Skinner's position had a considerable effect on the contemporary academic community. This eventually led to a paradigm shift back to the cognitive stance; or to what is now referred to as the cognitive revolution.

Today, it is common to believe that behaviourism died in the 1970s and that psychology consequently returned to its cognitive roots (Smith, 1994). It is also frequently claimed that radical behaviourism has been proven inadequate and can no longer be considered as an acceptable explanation of human behaviour (e.g. Lecas, 2006; Weilbacher, 2003). However, both statements are erroneous.

In fact, besides Chomsky's (1959) review, the year of 1959 was marked by a rapid increase in radical behaviourist studies, partly triggered by Verplanck's (1954) proclamation of radical behaviourism as a new effective approach to the study of human learning (Smith, 1994, p.2). This trend continued, even after the cognitive revolution supposedly took place, and the possibilities for applying the principles of radical behaviourism for behavior-shaping and modification in advertising and promotional contexts, as well as in consumer behaviour in general, began to be examined in a number of studies (Foxall, 1986a, 1986b; Grass & Wallace, 1969; Kunkel & Berry, 1968; Nord & Peter, 1980; Peter & Nord, 1982; Rothschild & Gaidis, 1981; Winters & Wallace, 1970). Although this fact is commonly disregarded, some scholars (Catania, 1973; Leahey, 1987) resultantly even questioned whether the cognitive revolution had ever occurred (Smith, 1994, pp.2-3). Today, especially in the consumer behaviour field, operant behaviourism is "alive and well" (Foxall, 1999b, p.210) and has significantly grown both in conceptual significance and in its range of empirical applications (c.f. DiClemente & Hantula, 2003a; Foxall, 2010).

Regarding the second statement, the conviction that radical behaviourism proved inadequate in explaining human behaviours, it arose due to another misinterpretation of radical behaviourism. In fact, as stated by Leigland (2010, p.217) in his recent review of contributions of radical behaviourism, "as a comprehensive, coherent and useful science of behavior, behavior analysis should have relevance to any or all questions and investigations of human behavior". Along the same lines, DiClemente and Hantula (2003a) provide a considerable list of successfully implemented behaviour modifications across industries and countries. They forecast that applied studies in this field would continue making important contributions to academic knowledge.

At this point it is necessary to explain how radical behaviourism relates to the objectives of the present research and to justify its selection as a guiding theoretical framework within the scope of the earlier identified knowledge gaps. First, as discussed above, behaviourism is mainly concerned with predicting behaviours rather than merely explaining them. Given that the rationale for this thesis lies in making a contribution to practice by predicting and stimulating consumer opt-in for m-advertising, this approach is most suitable for this study. Supporting this view, Biglan and Hayes (1996, p.54) particularly recommend adopting the contextual behavioural stance, rather than the cognitive position, to those who wish to make a practical contribution.

Second, the concept of reinforcement in radical behaviourism ($S \rightarrow R \rightarrow S^{R+/-}$) posits that only behaviours that produce rewarding consequences are retained and depicts consumer choice as a continuous ever-evolving process rather than a one-time act. When applied to the m-advertising context, this "selection by consequences" logic of radical behaviourism entails that it is *continued* use of m-advertising, rather than its mere acceptance by consumers, which should be at the centre of behaviour analysis. Therefore, this perspective satisfies the earlier underlined need of looking beyond acceptance and focusing on consumers' long-term committed uses of m-advertising.

Finally, while most previous studies on m-advertising acceptance concentrated on identifying pre-behavioural determinants of opt-in (e.g. Bauer et al., 2005; Jayawardhena et al., 2009; Karjaluoto, Lehto, et al., 2008; Kautonen et al., 2007; Koivumaki et al., 2006; Koivumaki, Ristola, & Kesti, 2008; Mort & Drennan, 2007; Muk, 2007a, 2007b; Peters et al., 2007; Tsang et al., 2004; Xu, 2006-2007), radical behaviourism focuses exclusively on the subject matter, the behaviour itself. Considering that cognitive theories of choice often do not reliably predict behaviours (Davies et al., 2002; Foxall, 1983, 1997a, 2002b; Hini et al., 1995; Milliman, 1982; Solomon, 1996; Wicker, 1969) and that intentions are not necessarily indicative of subsequent behaviours (Bemmaor, 1995; Kalwani & Silk, 1982; Morwitz, 1997; Morwitz & Sun, 2010), then radical behaviourism's sole focus on behaviour is yet another of its strengths compared to the numerous cognitive theories previously applied to the m-advertising context (Ajzen, 1991; Fishbein & Ajzen, 1975) as well as to their later extensions designed for analysing behaviours towards new products (Davis, 1989; Venkatesh & Davis, 2000b). For these three reasons, one being the general solution-oriented focus and the other two the capabilities for contributing to the above discussed research gaps, radical behaviourism has been chosen to guide the present research.

2.2 Behavioural Perspective Model

The Behavioural Perspective Model (BPM) (Foxall, 1990, 1997a) is a neo-Skinnerian model designed specifically for the analysis of complex human behaviours. Thus consumer behaviour (R) is preceded by a discriminative stimulus (S^D) and results in behavioural consequence (S^R), which, in turn, shapes new stimuli for future similar behaviours. The BPM is graphically shown in **Figure 3,** below:

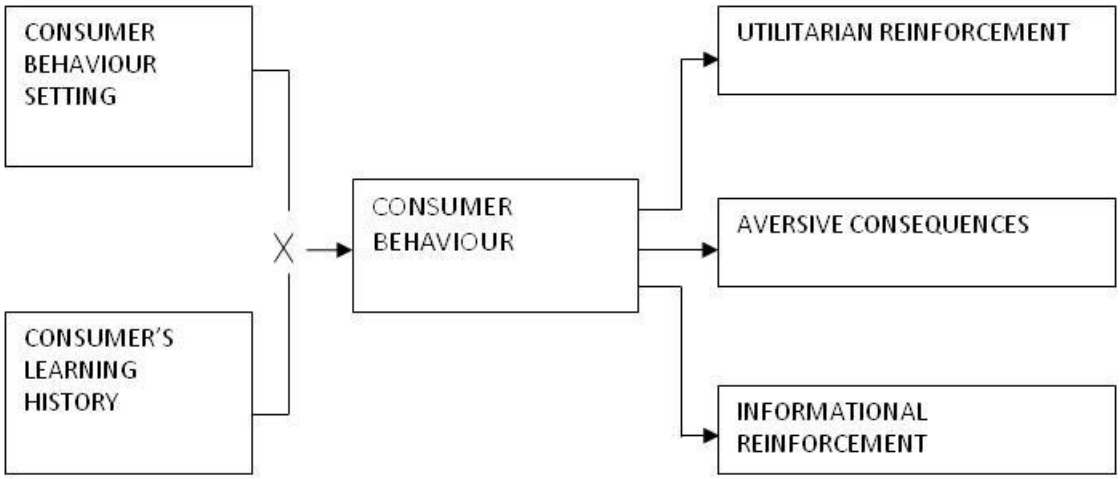


Figure 3 : Behavioural Perspective Model

Source: Foxall, G.R. (1997c, p.79)

In the BPM, discriminative stimuli (S) are represented by two elements – the consumer's learning history and the consumer's behaviour setting – and human behaviour (R) is shown to occur at the *intersection* of these. This representation signifies that consumer behaviour settings and individual learning history constantly interact, and activate each other through that interaction (Foxall, 1990, 1997a). Specifically, consumer learning history determines what elements of the setting will function as discriminative stimuli and the environmental setting determines which part of learning history will be activated (Foxall, 1995c, p.40).

For example, a consumer who had a positive experience of participating in a store's loyalty programmes (e.g. receiving discounts) would be likely to join such programmes at a new store upon seeing a leaflet about the availability of loyalty rewards. In other words, individual history causes the leaflet to discriminate the behaviour, whereas without such experience the same leaflet would remain a neutral stimulus. Similarly, it is the leaflet that triggers the history – without seeing the leaflet the history would not matter. Therefore, it is neither the history nor the setting that result in behaviour but their *interaction*, which in BPM represents a *situation.* This interaction, graphically shown as intersection in **Figure 3**, signifies an intersection of "time" (history) and "space" (setting) (Foxall, 2002a, p.42).

At the right side of **Figure 3** are the consequences of behaviour ($S^{R+/-}$), which can be positive utilitarian (i.e. functional and/or hedonic), positive informational (i.e. status-signalling), or aversive. Just like positive consequences, aversive stimuli, in turn, can also be sub-categorised into utilitarian punishments (e.g. economic cost, inconvenience) and informational punishments (e.g. embarrassment, damage to image). These consequences of behaviour form an individual's learning history, which may be activated on future occasions

(Foxall, 1990, 1997a). Thus, in radical behaviourist traditions, the BPM presents behaviour as a function of S➔R➔ $S^{R+/-}$ relationships.

Although having its conceptual roots in radical behaviourism, BPM introduces several changes that broaden the explanatory boundaries of Skinnerian behaviourism. First, it accounts for the possible variations in the relationship between behaviour and the reinforcement contingencies across the scope of behaviour settings. This point will be addressed in *section 4,* which explains situational variations in behaviours. Second, it adjusts radical behaviourism to human behaviour by bifurcating reinforcement into utilitarian and informational (Foxall, 1999a, p.572). Whereas the former addition allows application of the S➔R➔S explanation to a broader range of human behaviours, the latter addition accounts for the fact that human behaviour is largely determined by whether consequences are symbolic or functional. These two adaptations of the radical behaviourist system to complex human behaviours make the BPM's explanation preferable to that of Skinner, in this particular application context.

The BPM is suitable for the present research for the following reasons. First, the fact that its behaviour setting component and the learning history component are clearly separate allows a distinction to be made between the two groups of factors. It thus helps to contribute to the knowledge gap related to the classification of opt-in determinants. In addition, the BPM's notion of situation as a meeting place of the behaviour setting and the learning history contributes to the other knowledge gap related to modelling interrelationships between organisation-related and consumer-related factors. Further, since the BPM is based on radical behaviourism, the earlier discussed advantages of adopting radical behaviourism equally validate the use of the BPM for the present investigation. In particular, its strong focus on the outside organisation-related factors makes the model largely solution-oriented and thus highly relevant to managerial practice. It also inherits the other two strengths of radical behaviourism – namely its focus on the opt-in choice itself and its capability to continuously maintain consumer use of m-advertising. For these five reasons, the first two being the model's own advantages and the other three being inherited from radical behaviourism, the BPM is chosen as the analytical framework in this thesis.

2.3 Application of the BPM to M-advertising Opt-in Choice

The previous section provided a background for radical behaviourism and justified the choice of the BPM (Foxall, 1990, 1997a), a neo-Skinnerian model adapted to complex human behaviours. Since this research seeks to develop an operant account of opt-in choice in the m-

advertising context, it is necessary to discuss each of the BPM components in further detail and to specify how they can be applied to the chosen market context. This section therefore discusses the application of the BPM elements to m-advertising opt-in choice, building on previous research into consumer behaviour towards m-advertising.

Additionally, as m-advertising is a new service, analysis of opt-in behaviour requires accounting for one additional factor – consumer innovativeness. Taking into consideration that product newness adds another dimension to the argument, the proposed behavioural interpretation of opt-in choice is conducted by consolidating both the previous m-advertising research and the relevant research on new product adoption. Therefore, discussion of the application of each BPM element is supplemented with supporting evidence from two strands of research – the immediately relevant m-advertising acceptance studies and the innovation adoption studies.

2.3.1 Behaviour Setting

This section discusses the concept of consumer behaviour setting and its application in the m-advertising context. Behaviour setting is essential for interpreting consumer behaviours as it represents the various contextual influences on consumer choice. The behaviour setting consists of the physical, social, temporal and regulatory elements that activate individual learning history and, together with learning history, defines the consumer situation (Foxall, 1990, 1997a).

2.3.1.1 Physical Setting

According to the BPM, physical setting includes a wide range of physical surroundings, such as store size, music in-store, and product packaging (Foxall, 1990). The ability of such physical stimuli to influence consumer behaviour is widely acknowledged (e.g. Bosmans, 2006; Davies, Kooijman, & Ward, 2003; Donovan & Rossiter, 1982; Michon, Chebat, & Turley, 2005; Summers & Hebert, 2001; Turley & Milliman, 2000). For example, shoppers' behaviours are influenced by specific atmospheric variables, such as the level of in-store illumination (Areni & Kim, 1994; Summers & Hebert, 2001), the style and tempo of in-store music (Areni & Kim, 1993; Herrington & Capella, 1996; Mattila & Wirtz, 2001; Milliman, 1982, 1986; North, Hargreaves, & McKendrick, 1999), and in-store scents (Bosmans, 2006; Michon et al., 2005; Spangenberg, Crowley, & Henderson, 1996). As with the physical store context, the physical setting is also influential in online contexts (Eroglu, Machleit, & Davis, 2003; Koernig, 2003; Menon & Kahn, 2002) and in advertising contexts (Bruner, 1990; Gorn, Chadtopadhyay, Yi, & Dahl, 1997; Prendergast & Wah, 2005). For example, in online

environments, physical atmospherics (e.g. website colours, website design) influence consumers' attitudes and intentions (Koernig, 2003; Menon & Kahn, 2002) as well as their emotions and subsequent behaviours towards the websites (Eroglu et al., 2003). Similarly, in advertising, physical factors such as music (Bruner, 1990) and advertisement design (Gorn et al., 1997; Rosbergen & Pieters, 1997) are known to influence consumers' affective reactions to advertisements. Another example of the effect of physical setting on behaviours can be observed in cinema pre-roll advertisements where physical characteristics of the viewing venue (e.g. large screen, silence in the viewing hall, comfortable seats) positively influence advertisement and brand recall (Prendergast & Wah, 2005).

Consistent with this, physical factors are also important influencers of consumer behaviour towards new products (Chandrasekaran & Tellis, 2008; Jones & Ritz, 1991; Mallat, Rossi, Tuunainen, & Oorni, 2009; Mesak, 1996; Reinders, Frambach, & Schoormans, 2010; Steenkamp & Gielens, 2003; Ziamou & Ratneshwar, 2002). For example, innovation adoption probability varies depending on how much point of sale information about the new product is available (Ziamou & Ratneshwar, 2002) and can be enhanced by bundling a new product with familiar products (Reinders et al., 2010). The fact that fun products diffuse faster than work products (Chandrasekaran & Tellis, 2008) also suggests that entertaining features, also physical characteristics, positively influence new product adoption. Another important physical factor is the consumer's location (Mallat et al., 2009). In particular, research has shown that location largely influences consumer acceptance of mobile services (Mallat et al., 2009). Also, just like user location, the place or accessibility of product distribution points has direct implications on adoption probability (Jones & Ritz, 1991; Mesak, 1996; Steenkamp & Gielens, 2003), which again indicates the importance of physical setting in consumer behaviour toward innovations.

This evidence on the role of physical factors in physical retail, online, and traditional advertising environments clearly suggests the importance of accounting for physical factors in analysing consumer behaviour towards m-advertising. However, how does the concept of physical setting translate to the m-advertising application context and would its interpretation be any different from those in other contexts?

This thesis argues that, although some aspects of physical settings are directly transferable to the m-advertising context, there are several unique to this particular area of application and require careful examination. Specifically in m-advertising, just like in a traditional advertising context, of critical importance will be the *informativeness* of the m-advertising content. Unless this information is relevant to one's product preferences and general interests it will be

more likely rejected by potential users (Bauer et al., 2005; Merisavo et al., 2007; Okazaki, 2004; Tsang et al., 2004; Yermekbayeva & Xiao, 2011; Zhang & Mao, 2008).

Besides the mere practical informativeness, another important factor for stimulating opt-ins, as applicable to m-advertising as with other advertising contexts, is *entertaining content* (Bauer et al., 2005; Merisavo et al., 2007; Okazaki, 2004; Tsang et al., 2004; Xu, 2006-2007; Yermekbayeva & Xiao, 2011; Zhang & Mao, 2008). Whereas plain-text may have been an acceptable option a decade ago when technologies were still scarce, consumers now are spoiled by technology and by a multiplicity of choice alternatives (Heinonen & Strandvik, 2007; Lewis & Bridger, 2001; Windham & Orton, 2000). Therefore, there is a growing need for designing creative and entertaining m-advertising solutions (Bauer et al., 2005). In-game m-advertising or advertising videos, for instance, may be useful alternatives to plain-text advertisements in stimulating opt-ins.

Further, another universally applicable feature that may be important in generating opt-ins is the *quality of content design* (Barnes & Scornavacca, 2008; Yermekbayeva & Xiao, 2011). It can be argued that well-designed advertisements are likely to be effective in all contexts, including m-advertising. The importance of this factor should not be overlooked, as previous studies have shown content design quality and uniqueness to be highly positioned in the consumer decision hierarchy (Barnes & Scornavacca, 2008).

Besides physical characteristics that are similar to those of other advertising formats, there are also physical factors that are unique to m-advertising. For example, due to a relatively smaller advertising space (screen size) than that of other advertising formats, m-advertising requires unique content solutions (Haghirian et al., 2005). Therefore, *advertisement length* is an additional physical factor unique to m-advertising. In line with this argument, content conciseness has previously been proven to influence consumer intentions to accept m-advertising (Barwise & Strong, 2002; Leek & Christodoulides, 2009; Yermekbayeva & Xiao, 2011) and is thus an important factor to consider. For example, consumers may be discouraged or unable to read long texts on a mobile phone and therefore a long m-advertisement, regardless of how informative, entertaining or well-designed it is, will most likely remain unread or be deleted.

Next, of particular relevance is the *promotional price content* of m-advertising. Given the limited space of the mobile device, content preferences of consumers are likely to differ from those attributed to other types of advertising. Rather than looking for general information about products or places, consumers are likely to prefer concrete information on product

prices or ongoing promotions (Yermekbayeva & Xiao, 2011). For example, an m-advertisement containing practical price information, such as promotion notifications ("Flash 24 hour sale just launched on the website") or weekly best deals ("This week's best buys in Tesco") are likely to be more appealing than descriptive m-advertisements ("We are pleased to inform you of a new range of porcelain mugs available in store"). This argument is consistent with the evidence that consumers are mostly looking for the monetary value of m-advertising (Pura, 2005) and for quick solutions to problems (Peters et al., 2007).

Also, as m-advertising involves receiving advertisements through a technological medium, the *mobile phone's technological capabilities* may also function as a restricting or enabling physical factor. For example, many of application-based m-advertisements are only available to users whose mobile phones are compatible with the technology. Although it has not been previously addressed in m-advertising studies, given the content accessibility implications, this factor clearly requires consideration.

Moving on from content-related factors to outside physical factors, accounting for *user's location* in predicting opt-ins is particularly important; because mobile phones are carried by people, the physical setting in which m-advertising can be used is constantly changing too (Shankar et al., 2010). The location factor is also unique to mobile phones because no other advertising medium is normally used in a comparably wide range of settings (e.g. Friedrich et al., 2009; Jelassi & Enders, 2006; Laszlo, 2009). Given the device's intrinsic mobility characteristic, a user's location at the moment of being offered m-advertising is one of the most important factors in predicting opt-in choice (Bamba & Barnes, 2007; Barnes & Scornavacca, 2008; Merisavo et al., 2007; Pura, 2005; Rettie & Brum, 2001). For example, the same advertisement about a new hot chocolate deal in Starbucks may be gladly accepted if a Starbucks store is nearby but if there is not then the information may have no value to the user and thus the possibility of opt-in will be minimal.

Overall, the proposed set of physical factors in the m-advertising context consists of both universally applicable factors which include (1) informative content, (2) entertaining content, and (3) content design; and several factors unique to m-advertising, namely (4) advertisement length, (5) price content, (6) mobile phone's capabilities, and (7) location context.

2.3.1.2 Social Setting

Social setting refers to the social surroundings and other social influences on consumer choice (Foxall, 1990). The evidence of the effect of social setting on consumers is abundant (e.g.

Ebster, Wagner, & Neumueller, 2008; Harris, Baron, & Parker, 2000; Luo, 2005; Mangleburg, Doney, & Bristol, 2004; McGrath & Otnes, 1995; Sommer, Wynes, & Brinkley, 1992; Wakefield & Inman, 2003). In the in-store context, for example, when doing shopping in groups, people are likely to spend more time in stores and to buy larger amounts of products than when they shop alone (Mangleburg et al., 2004; Sommer et al., 1992). Interestingly, the presence of different people tends to stimulate different types of behaviours (Ebster et al., 2008; Luo, 2005). In particular, when accompanied by children, parents are influenced by their children's shopping requests significantly more than they realise (Ebster et al., 2008), and company of peers tends to increase the urge to buy impulsively (Luo, 2005). In contrast, the presence of an older family member encourages more rational buying and reduces shopping impulsivity (Luo, 2005). Besides family members and peers, strangers are another group influencing shoppers' behaviours (Johnston, 2002; McGrath & Otnes, 1995). For example, consumers are often affected by social interactions with other consumers in store (McGrath & Otnes, 1995) and can even imitate the behaviours of strangers (Johnston, 2002). In crowded places, consumers tend to follow their shopping lists, spend less time in a store, postpone some purchases, avoid social contacts, do not engage in exploratory behaviours, and buy smaller volumes of products than usual, in order to use express checkouts (Harrell, Huh, & Anderson, 1980; Michon et al., 2005).

In the advertising context, social setting is no less important than in the physical retail context (Prendergast & Wah, 2005; Puntoni & Tavassoli, 2005). For example, in cinema theatres, the presence of other viewers pressurises people into paying attention to pre-roll advertisements, thus improving their recall of the advertised brands (Prendergast & Wah, 2005). Similarly, when watching advertisements in the presence of an opposite sex confederate, people recognise and remember words related to social desirability better than they do ordinary words (Puntoni & Tavassoli, 2005).

Next, in the innovation adoption literature, since interpersonal communication and social systems are both considered the founding elements of the diffusion process (Rogers, 1962, 1995), the role of other people in individual adoption choices has also been emphasised (Baumgarten, 1975; Engel, Keggereis, & Blackwell, 1969; Feick & Price, 1987; Götze, Prange, & Uhrovska, 2009; Leonard-Barton, 1985; Rogers, 1962, 1995). Specifically, the innovation adoption literature underlines the importance of *innovators* (Baumgarten, 1975; Engel et al., 1969), *opinion leaders* (Iyengar, Van den Bulte, & Valente, 2010; Leonard-Barton, 1985; Watts & Dodds, 2007), *market mavens* (Feick & Price, 1987), *network hubs* – individuals with many social connections– (Goldenberg, Han, Lehmann, & Hong, 2009), and *family members* (Cotte & Wood, 2004; Götze et al., 2009) in spreading innovation. These

groups can affect individual decisions by informing potential adopters of a new product and/or recommending its use.

In addition, sometimes mere exposure to an innovation within one's social network can stimulate adoption (Valente, 1996). For example, Valente (1962, 1996) uses the idea of "network thresholds" to explain diffusion. He argues that to adopt an innovation, different people may need to be subject to different levels of innovation exposure within their personal networks (i.e. varying network thresholds). Accordingly, individuals with low network thresholds will adopt earlier than those with high network thresholds (Valente, 1996). Over time, as innovation spreads, exposure inevitably increases for each potential adopter (i.e. they see more people using it), and, hence, people with high network thresholds are also pressured into adoption (Valente, 1996).

Importantly, besides merely observing adoption within personal networks, potential adopters can observe precisely how others use the innovation and learn about its benefits from those observations (Manchanda, Xie, & Youn, 2008). Therefore, each adoption is said to produce a positive "contagion" effect that facilitates subsequent adoptions (Iyengar et al., 2010; Manchanda et al., 2008; Van den Bulte & Lilien, 2001). This contagion effect was found to increase subsequent adoptions by an additional 11% above the adoptions due to marketing efforts alone (Manchanda et al., 2008).

Besides the separate roles of selected social groups or personal networks, innovation adoptions are largely influenced by the *overall* popularity of new products (Abrahamson & Rosenkopf, 1997; Delre, Jager, Bijmolt, & Janssen, 2010; Granovetter & Soong, 1986). That is, upon learning about the popularity of an innovation through media or by observing strangers using it, people's interest will be triggered and they will follow the trend and adopt the product. This bandwagon argument is also consistent with the Bass innovation diffusion model (Bass, 1969) and its later extension (Mahajan, Muller, & Srivastava, 1990), where, at a given point in time, adoption probability is shown to depend on a number of previous adoptions.

Overall, the above evidence clearly indicates the importance of accounting for social setting in analysing consumer opt-in choice in the m-advertising context. Regarding whether the interpretation of social setting, used in other application contexts, is transferable to the m-advertising context, this thesis argues that social influences on consumer choice are universal and no context-specific adjustments, as is the case with physical setting, are therefore necessary.

Consistent with evidence from other contexts, social influence in m-advertising can appear as a form of peer influence. For example, consumers are more likely to opt-in for m-advertising if they receive a *personal recommendation* (Leek & Christodoulides, 2009; Yermekbayeva & Xiao, 2011). Thus m-advertising business models based on information forwarding and social referrals remain a possible area for future industry development (Palka et al., 2009; Wais & Clemons, 2008). An illustrative example of the effect of social referrals has recently been demonstrated by ad-funded mobile operator Blyk, where subscription to the mobile network was conditional on receiving an "invite code" from an existing user.

Besides personal recommendation, as in other contexts, one should expect *immediate social surroundings* to play a particularly significant role in consumer m-advertising opt-in choice. For example, if consumers are offered m-advertising when they are with someone else, they may be more likely to reject the offer than they otherwise would. In other words, the company of a family member or a friend is likely to take most of the recipient's attention, leaving very limited time for activities such as reading or interaction with advertisements. Similarly, a crowded place may cause stress and as a result also discourage people from engaging with advertisements.

However, there may be exceptions to this rule. For instance, where a desirable subscription offer is publicly visible, people may find it difficult to refuse and the social context will thus have a positive influence. Imagine a man who is shopping at a luxury store with a lady he wants to impress. Even if he normally does not shop there, when offered to subscribe to personalised mobile notifications from that store, in the presence of that lady, he may be tempted to subscribe only to impress her. Similarly, when offered to subscribe to healthy-eating information in the presence of others, people may be pressured to agree because of social desirability. Therefore, although generally the presence of other people will serve only to distract potential users, there can be situations where the presence of certain people increases opt-in probability.

Further, consistent with the evidence from innovation adoption on the importance of popularity, the general *popularity of m-advertising* is another type of social factor that needs to be considered (Yermekbayeva & Xiao, 2011). That is, people may not necessarily need to hear a personal recommendation to adopt – they may observe others actively using it or become aware of the high demand for this service. High exposure to m-advertising both within and outside personal networks is therefore expected to increase opt-in likelihood. Through regularly observing m-advertising use by people within their personal network, consumers may learn about its advantages (e.g. getting to know about a new promotion

sooner than others) and consequently opt-in for it. Similarly, awareness of the service's general popularity (e.g. in a news report) may trigger interest and make people more likely to follow the trend.

The above discussion clearly indicates that social factors are likely to significantly influence m-advertising opt-in choices. The proposed interpretation of the social setting includes (1) personal recommendations, (2) immediate social surroundings, and (3) m-advertising popularity.

2.3.1.3 Temporal Setting

Temporal setting refers to time-related factors affecting consumer choice (Foxall, 1990). Foxall (1999c, p.145) gives examples of temporal stimuli in the context of in-store shopping: shop opening/closing times; duration of store promotions; and the Christmas period. For example, when a shop is about to close and consumers do not have enough time to walk through all the food rows, they may fill the trolley with products located only in certain aisles or follow their shopping lists more strictly than they otherwise would. Consumers may also buy smaller quantities of products that expire soon and larger quantities of products that are on limited-time promotion. Similarly, before Christmas and birthdays, consumers' shopping trolleys may be filled with a more indulgent food than during other times of the year.

Empirical examples of the effects of temporal setting are abundant (e.g. Aggarwal & Vaidyanathan, 2003; Geiger, 2007; Inman & McAlister, 1994; McGoldrick, Betts, & Keeling, 1999; Park, Iyer, & Smith, 1989). For instance, people are more inclined to purchase impulsively during seasonal sales (McGoldrick et al., 1999). Limited-time promotions (e.g. store coupons with expiry dates) increase sales more than promotions of longer duration (Aggarwal & Vaidyanathan, 2003) and sales generally tend to increase rapidly closer to the expiration date of discount coupons (Inman & McAlister, 1994). Under time pressure, consumers often fail to make planned purchases and easily switch to other brands due to difficulties in finding their favourite brands or products (Park et al., 1989). Shopping on the day before a holiday is another manifestation of the time pressure effect. When shopping occurs on Christmas Eve, for instance, consumers tend to be less selective than usual (DiClemente & Hantula, 2003b, p.788). Some consumer behaviours are especially more time-dependent. For example, shoplifting tends to occur most frequently in pre-holiday seasons, towards the end of the week, and during daytime (Nelson, Bromley, & Thomas, 1996). Similar effects of temporal factors are also evident in people's behaviour towards advertising (Anand & Sternthal, 1990). The fact that consumers' reaction to advertisements depends on

the time available for its processing, for instance, evidently demonstrates the role of time in consumer behaviour (Anand & Sternthal, 1990).

In consumer behaviour towards innovations, temporal factors are also important. One of manifestations of the significance of the time factor is the concept of "temporal distance" from the planned adoption, which has been proven to influence adoption choices (Castano, Sujan, Kacker, & Sujan, 2008; Wang et al., 2008). Specifically, when consumers consider adopting a new product in a distant future, they tend to focus primarily on the positive aspects of adoption. However, over time, as the date nears when adoption choice is to be made, they start to focus increasingly on the possible risks associated with the intended new product purchase. Consequently, their adoption intentions weaken over time (Castano et al., 2008; Wang et al., 2008). Although this dimension of research is not particularly developed in the innovation adoption area, the importance of temporal distance in predicting adoptions can be interpreted as an indicator of the role of temporal setting in innovation adoption choice.

Regarding the question of whether temporal setting in m-advertising context needs to be interpreted differently from other contexts, this thesis argues that as with physical setting, although some aspects of temporal setting can be understood in the same way as in other application contexts, there are temporal factors that only apply to m-advertising. Specifically, consistent with previous research (e.g. McGoldrick et al., 1999), and as in the retail context, one should expect sale and holiday seasons (*season time)* to increase consumer receptiveness of m-advertising. These are times when consumers shop the most and thus are first, most likely to be interested in this kind of information and second, can immediately benefit from using m-advertisements in terms of receiving notifications of the newest offers and sales earlier than others (Yermekbayeva & Xiao, 2011). Season time can also be broadly interpreted as similar to the effect of time pressure and limited-time promotion factors in the m-advertising context; the very idea of m-advertising lies in information exclusivity in terms of early timeliness of receiving information. That is, getting to know about a recently launched sale imposes an implied temporal limitation on the recipient (i.e. acting on it soon so as not to lose the advantage). Therefore, the argument that holiday and sale seasons influence opt-in choices is also consistent with earlier retail research on time pressure (Park et al., 1989) and limited-time promotions (Aggarwal & Vaidyanathan, 2003).

However, beside temporal factors that are transferable from other application contexts, there are also temporal factors that are unique to m-advertising. One such factor is temporal relevance *(or timeliness)* of m-advertising. For example, an advertisement informing the receiver about ongoing promotions for scarves will be especially relevant when the consumer

is looking for a Christmas present for a friend. In support of this argument, the role of timeliness has been identified in a number of studies, including studies on m-advertising (Bamba & Barnes, 2007; Barnes & Scornavacca, 2008; Carroll et al., 2007; Grant & O'Donohoe, 2007; Koivumaki et al., 2008; Merisavo et al., 2007; Pura, 2005; Rettie & Brum, 2001; Salo & Tähtinen, 2005; Yermekbayeva & Xiao, 2011), m-applications (Figge, 2004), m-internet services (Lee, Kim, & Kim, 2005), m-commerce (Lee & Jun 2007), and m-ticketing (Mallat et al., 2009).

Another factor unique to m-advertising is related to the *possibility to select delivery times (or temporal flexibility*) of m-advertising. Specifically, since consumers are generally unwelcome of m-advertising and prefer to have control over the delivery process (Bamba & Barnes, 2007; Carroll et al., 2007; Leek & Christodoulides, 2009; Rettie & Brum, 2001; Yermekbayeva & Xiao, 2011), the possibility of selecting delivery times can be especially important in this context. Some people, for example, do not wish to be distracted at certain times and absence of an option to specify their time restrictions may minimise the probability of their opt-in even if they were initially interested in the offer. Similarly, the presence of time adaptability may prove a decisive factor for those who are hesitating at first as such an option minimises the interruption risk and gives them the opportunity to adjust the delivery times to their preferences.

In the light of the foregoing discussion it can be said that temporal factors are highly relevant to predicting m-advertising opt-in choice. To summarise, the temporal setting in the m-advertising context is interpreted in terms of: (1) timeliness of m-advertisements, (2) season time, and (3) the possibility of selecting delivery times.

2.3.1.4 Regulatory Setting

According to the BPM, regulatory setting consists of a set of rules that are imposed on consumers and thus direct their behaviours in the given setting (Foxall, 1999c). Foxall (1994a, p.37) provides examples of how management can reduce the demand by changing such rules: they can increase admission standards by setting up a dress code and increasing the admission price; in a bar, they may require customers to wait for tables or prohibit entrance to certain areas for specific groups (e.g. parking only for hotel guests).

Although not sufficiently explored, regulatory factors are intuitively known to influence consumer behaviour in a wide range of contexts. For example, in a grocery store, customers with less than five items in their baskets may be asked to use self-service counters, some stores may only accept certain methods of payment, and product return policies may vary

across stores. Retailers may dictate product ordering procedures (e.g. Argos requires buyers to write down a reference number of a product they want to buy, wait in a queue to hand in to a member of staff, and then queue to collect the order). Specific products may also require consumers to follow additional rules. For example, to be sold some weight loss medications a consumer may be required to have a series of medical tests to prove that he/she is overweight and in need of the given product, and the purchase of an alcoholic drink or a knife may require a proof of age. In some consumption contexts regulatory setting is particularly critical. For example, with counterfeit buying, consumer choices are positively affected by lax law and simultaneously discouraged by occasional punishments imposed on buyers (Jacobs, Samli, & Jedlik, 2001; Xiao, 2006; Xiao & Nicholson, 2010). Similarly, in retail malls shoplifting behaviours are often stimulated by open store settings with unrestricted access to merchandise (i.e. lack of regulatory constraints) which lower the risk of apprehension and tempt consumers into stealing (Lo, 1994; Tonglet, 2002). In contrast, when regulatory settings minimise unconstrained consumer access to goods, for example in Argos, where consumers can only receive products at the collection desk, shoplifting opportunities are close to impossible.

As far as the advertising context is concerned, whereas in traditional advertising there are hardly any possibilities for regulatory factors to affect consumer choice since people do not have to follow any rules or guidelines to watch advertisements, practice has shown that in the m-advertising context, such factors are of critical importance. Specifically, the ad-funded mobile network Blyk, which operated in the UK, required consumer engagement into a *contract with the mobile service provider*, completion of an *application form* and *answer forms* about one's general interests and brand preferences, and enablement of certain *technological features on consumers' mobile phone*.

Clearly, not only the interpretation of regulatory setting in m-advertising context is notably different from those in other application contexts, but also it is likely to have a negative rather than stimulating effect on opt-ins. With such rules to follow and conditions to fulfil, consumers are restrained in their freedom and can thus choose to reject m-advertising. In support of this argument, a recent study on consumer opt-ins for m-newsletters has reported that when asked to provide personal information, such as gender, age and address, consumers were highly reluctant to do so and did not respond to m-advertising positively (Okazaki, Li, & Hirose, 2009). Such possible negative effects of regulatory factors are especially understandable considering that m-advertising is often unwelcome by consumers (e.g. Bamba & Barnes, 2007; Carroll et al., 2007; Kolsaker & Drakatos, 2009). Hence, in contrast to other elements of behaviour setting, regulatory setting is likely to have a negative effect on consumer opt-in choices (Yermekbayeva & Xiao, 2011).

In light of the above discussion, regulatory setting can be expected to exert a significant influence on consumer opt-in choice in the m-advertising context. From the practical evidence available, the suggested regulatory factors are: (1) a contract with the provider, (2) application forms, (3) answer forms about a subscriber's interests and preferences, and (4) technological requirements needed to use the service.

To summarise, this section has reviewed relevant streams of research for the four types of settings suggested by the BPM and specified ways of applying the setting concepts to the chosen m-advertising context. Based on the above discussion of the various elements of setting and their respective roles in opt-in choice it can be expected that each of the four types of behaviour setting would have an influence on choice. Therefore, it is proposed:

> **P1**: *Behaviour setting elements will significantly influence m-advertising opt-in choice.*

2.3.2 Learning History

Just like behaviour setting, learning history is another behaviour antecedent in the BPM (Foxall, 1990, 1997a). Learning history activates the behaviour setting by making otherwise neutral stimuli become discriminative and gives the model its interpretive capability (Foxall, 1995c, 1997a; Foxall & Greenley, 2000). This construct is therefore integral to the concept of the consumer situation, which is located at the point of intersection of the setting and the learning history. Learning history represents the personal factors influencing consumer choice and includes three types of variables: (1) genetic history, (2) state variables, and (3) individual learning history (Foxall, 1992, 1994a). In addition to these three components of the learning history, this thesis would also argue that the culture in which individual experiences are accumulated can also be interpreted as a part of learning history.

2.3.2.1 Genetic History

The notion of genetic history is based on the conviction that human behaviours have evolutionary origins (Foxall, 1993, 1995c; Nicholson & Xiao, 2007). The influence of genetic history, which is defined as "the product of an evolutionary past", on a consumer's current behaviour is evident from the effects of gender and ethnicity (Foxall, 1994a, pp.29-30). Unlike the myriads of cognitive theories, which merely acknowledge the impact of demographic factors on consumer behaviour, behaviourism provides a convincing explanation for it.

In behaviourist terms, the differences between the behaviours of men and women, for example, are best explained by their dissimilar evolutionary development rather than by

demographic factors. When asked why women often spend more time browsing grocery stores than men, an advocate of the cognitive stance would probably attribute these differences between genders to their belonging to different demographic groups. And yet a behaviourist would look for the explanation in the evolutionary past of both genders and put forward the idea that women and men historically have had different responsibilities; while men were responsible for hunting and in doing so, had to chase animals, women were responsible for activities which involved little time pressure, such as collecting berries and planting seeds. This evolutionary past, a behaviourist would say, has resulted in behavioural dissimilarities between the sexes, which are now observable in divergent contexts including, but not limited to, shopping behaviour. In a similar way, genetic history may also be manifested in the person's physical characteristics such as size and physical build that would also affect his/her current behaviour (e.g. their volume of consumption) (Foxall, 1994a).

However, this thesis would argue that the magnitude of the effect of genetic factors could vary greatly across behaviour contexts. For example, if one takes grocery shopping, a bio-basic food gathering activity that people have engaged in for as long as humanity has existed, it is likely that evolutionary history related to food gathering would have a pronounced effect on how people shop. Consistent with this argument, grocery shopping is often analysed as a basic foraging activity (Abarca & Fantino, 1982; Foxall & James, 2003; Kaplan & Hill, 1992). However, in contexts such as technology that are relatively new to consumers, the effects of evolutionary past may not be as pronounced because, unlike bio-basic activities, such behaviours are still being learned and the characteristic behavioural patterns may not have yet fully developed. This is especially true for the m-advertising context that has only recently appeared. Taking this into consideration, this thesis would therefore argue that genetic history would not hold particularly high significance in the chosen context and can thus be disregarded in this research.

2.3.2.2 State Variables

State variables generally refer to momentary factors at the point of behaviour occurrence (Foxall, 1992, 1994a). For example, consumers in a bad mood would be likely to display different behaviours from those who are in uplifted spirits. Consumers in bad mood may lose self-control in their buying and eating decisions (e.g. Baumeister, Heatherton, & Tice, 1994; Tice, Bratslavsky, & Baumeister, 2001) and spend more than they usually do (Lerner, Small, & Loewenstein, 2004). Other examples of state variables include momentary absence of cash in hand that naturally limits buying opportunities; having a severe toothache and being unable to shop; not being dressed appropriately to enter the desired setting; suddenly developing an allergy to the perfume used in store and having to leave the setting to avoid worsening the

condition; and all other imaginable momentary factors that are specific to a particular situation at a given moment in time.

Although many, if not all, situations are influenced by such state variables these factors are hard to analyse due to their fleeting and elusive nature. Therefore, despite the fact that possible effects of such variables are acknowledged, they are generally omitted in empirical BPM research (Foxall, 1992, 1994a). Therefore, in this research too, state variables are not explored.

2.3.2.3 Individual Learning History

The core component of learning history is *individual* learning history defined as "the cumulative effect of rewarding and punishing outcomes of past behaviour (Foxall, 1990, 2007a, p.9). Individual learning history represents the personal factors influencing consumer choice and primes the consumer's approach/avoidance responses (Foxall, 1990, 2007a). Unlike genetic history that individuals inherit, learning history accounts for personal experiences accumulated over their lifetime. Further, although both learning history and state variables have immediate effects on consumer behaviour (Foxall, 1994a), state variables are assumed to have only *temporary* influence on consumer behaviour whereas individual learning history has a *lasting* effect on behaviours and is thus the central concept of the BPM (Foxall, 1990, 1997a). With this in mind, this thesis concentrates solely on the role of individual learning history (or past experiences) in m-advertising opt-in choice.

Notwithstanding the undoubted importance of individual learning histories, however, one should also be aware of the difficulties associated with using this concept. Since information about people's past experiences is often unavailable, operationalisation of this concept has been problematic which resulted in difficulties with testing the BPM (Leek et al., 2000). Traditionally, radical behaviourism has avoided the language of intentional psychology such as "beliefs" and "desires" in explaining human behaviour (Foxall, 1974, 1998, 2007b, 2007c) and "swept this problem under the carpet" (Leek et al., 2000, p.24). And yet the problem remained unsolved. Unlike laboratory experiments, where animals are observed from the moment they are born, adult consumers enter the setting with their own histories unavailable to the researchers (Foxall, 1995c). To overcome this problem, the only solution for researchers is to use "verbal surrogates of a learning history, to ask respondents to report on the antecedents and consequences of this prior behaviour" (Foxall, 1995c) and reconstruct parts of learning history "by observation and questioning such as the various attitude theories require" (Foxall, 2002a, p.42). In support of this argument, a previous application of this method (Leek et al. 2000) has given evidence that consumption history can be partly

reconstructed through consumers' attitudinal statements. Therefore, in cases where information about past experiences is unattainable, attitudes can be used as complementary measures of past experience.

This thesis, however, takes a slightly different position regarding this issue. Instead of relying solely on attitudinal statements about behaviour *consequences*, as by Leek et al. (2000), it proposes using verbal attitudinal evaluations of *past* experiences for this purpose. Although this approach is generally similar to that adopted by Leek et al. (2000) in that it advocates use of verbal surrogates to reconstruct individual learning histories, it is nevertheless different in its focus. The argument is that using verbal statements about past experience itself, rather than verbalised attitudes about behaviour consequences, is a more straightforward and potentially equally effective method for gaining knowledge about people's past experiences. Thus, although the role of attitudes is acknowledged in this thesis, the focus of its investigation lies mainly in verbal reports on past experiences.

Prior to further discussion of the individual learning history concept, it is necessary to emphasise the uniqueness of this concept and explain how it differs from many other popular views on the role of past experiences in consumer choice. First of all, regarding the effect of past behaviours on present actions, there have long been academic disagreements relating to the underlying mechanism behind this effect. On one side, some scholars attribute the effects of past experiences on behaviour to the process of habituation (Aarts, Verplanken, & Van Knippenberg, 1998; Ouellette & Wood, 1998). The general argument is that behaviours that are originally intention-driven may, after many repetitions, become habitual and are then automatically activated by environmental cues (Aarts et al., 1998; Ouellette & Wood, 1998). On the other side of the argument are scholars who disagree with this automaticity logic (Ajzen, 2002). Specifically, Ajzen (2002) challenges the argument that behaviours are merely automatic on the basis that past behaviours affect later behaviours not only in situations where the behaviour is habitual but also in low-probability behaviours, such as marriage infidelity. Following the cognitive theory logic, he explains the effect of past behaviours on present actions merely by reference to "residual effects" of past actions. He insists that human behaviours are on *all* occasions determined solely by intentions rather than being automatic (Ajzen, 2002). These two opposing perspectives were later tested by Kim et al. (2005) who disproved intentionality and found the evidence in support of the automaticity/habituation argument. According to their study, in situations where users have substantial experience performing behaviour, they tend to do it automatically rather than follow evaluation-intention-behaviour pattern as Ajzen (2002) suggested (Kim et al., 2005).

With these disagreements in mind, where does the BPM stand in terms of its explanation of the proposed effect of individual past experiences on future behaviours? The answer is that it both agrees and disagrees with these two stances on several distinct points. Firstly, both arguments are consistent with the BPM perspective that it is the environment that activates personal history and that past experiences influence consumer choice in both frequently-occurring and low-probability behaviours. However, the BPM explains the origins of such effects from a perspective notably different from the views discussed above. While the advocates of the habituation perspective believe that behaviours are initially intention-driven and *later* become automatic, and the advocates of the cognitive perspective argue that behaviours are conscious *at all times* even after they become habitual, the BPM views past experience as being automatically activated by environmental stimuli *throughout* one's lifetime. Of additional importance, the BPM's explanation of the effect of past experience on behaviours is more comprehensive than that of the habituation perspective. Whereas the habituation/automaticity argument rests on the assumption that past experience influences choice because individuals accumulate large *amounts* of experience, the BPM's account of learning history goes beyond that. According to the BPM, future behaviours are influenced not merely by the amount of past experience but by the *nature* of past behaviours. For example, a person who buys fruit smoothies does so not because he/she is an expert in smoothies but simply because his/her previous experiences, however limited, were rewarding enough to reinforce future consumption. That is, the consumer is shown to learn from experiences and to adapt to situations rather than to follow routine behaviour patterns. In the light of these differences, the BPM explanatory account of the effect of past experiences on future behaviours clearly appears more comprehensive than the two discussed earlier.

Secondly, scholars have long had disagreements about the role of past experiences in human behaviours. On one hand, a recent version of the TPB (Fishbein & Cappella, 2006), for example, includes the past behaviour factor merely as a *background* influence, which is believed to be implicit rather than direct. Supporters of this position (e.g. Ajzen, 1991) believe that inclusion of past experience to cognitive models adds very small variance to the prediction of behaviour. On the other hand, some studies indicate that past behaviour has an *independent* and *direct* influence on behaviour intention and that inclusion of the past behaviour variable into cognitive models considerably improves their predictive accuracy (Bagozzi, 1981; Bagozzi & Kimmel, 1995; Bagozzi & Warshaw, 1990; East, 1993). It is noteworthy that in some cases this direct effect of past experience on current behaviour is particularly strong. For instance, in studies on exercising behaviour, past behaviour is the *best* predictor of subsequent behaviours (Godin, Valois, & Lepage, 1993; Godin, Valois, Shephard, & Desharnais, 1987; Mullen, Hersey, & Iverson, 1987; Norman & Smith, 1995).

To add to the growing evidence of these strong direct influences, Conner and Armitage (1998) reported that on average, the past behaviour construct explained as much as 13% of variance in behaviour.

In this respect, the BPM position is clearly in favour of the scholars who argue for the direct, independent, and strong effects of past experiences on behaviours. It thus presents the individual learning history as an *independent* choice predictor. However, unlike previous studies that suggested such direct effects (Bagozzi, 1981; Bagozzi & Kimmel, 1995; Bagozzi & Warshaw, 1990; East, 1993), the BPM does not look at the subject in isolation. Instead, as explained earlier, the BPM posits learning history to be activated by the setting and thus to have contextual rather than independent power over behaviour, which is again one step beyond the commonly held view.

It is now clear as to which types of learning history this thesis focuses on and how the BPM explanation of the effect of past experiences differs from those in other theories. Thus, it is necessary to link the theoretical discussion of the learning history concept to the relevant factors from previous m-advertising and innovation adoption research and explain how this construct can be applied to the m-advertising context. Therefore, what follows is a detailed discussion of the interpretation of individual learning history in the m-advertising context.

In the light of the foregoing discussion of the role of past experiences in consumer choice, it is to be expected that consumers' relevant past experiences will play an important role in their m-advertising opt-in choices (Barnes & Scornavacca, 2008; Jayawardhena et al., 2009; Karjaluoto, Jayawardhena, et al., 2008; Kautonen et al., 2007; Koivumaki et al., 2006; Leek & Christodoulides, 2009; Okazaki, 2004; Yermekbayeva & Xiao, 2011). For example, someone who has previously subscribed to m-advertising from a favourite hotel, and found the service quite useful, will be more likely to subscribe to similar offers next time he/she is offered to do so. In other words, *past experience with m-advertising* is likely to have a strong effect on future subscription probability (Barnes & Scornavacca, 2008; Jayawardhena et al., 2009; Yermekbayeva & Xiao, 2011).

However, is the service-specific experience the only type of experience that matters? Since the m-advertising service is relatively new and consumers generally know very little about the possible risks involved, another type of experience that should be considered is consumer experience with the advertising source – the advertiser company. *Personal experiences with a potential advertiser* are likely to have a strong effect on opt-in probability (Barnes & Scornavacca, 2008; Jayawardhena et al., 2009; Karjaluoto, Jayawardhena, et al., 2008;

Karjaluoto, Lehto, et al., 2008; Kautonen et al., 2007; Leek & Christodoulides, 2009; Yermekbayeva & Xiao, 2011; Zhang & Mao, 2008). For example, if a person who loves freshly prepared hot chocolate accidentally discovers that he/she has been served a cup of instant chocolate instead, the resultant disappointment (i.e. negative experience) will not only discourage him/her from ordering chocolate there in future but also make him/her very unlikely to support their m-advertising initiatives.

Similarly, in innovation adoption studies, there is also abundant evidence of the importance of experience for choice prediction (e.g. Chau & Hui, 1998; Citrin et al., 2000; Engel, Blackwell, & Kegerreis, 1969; Goldsmith, Flynn, & Goldsmith, 2003). Specifically, a vast amount of literature has confirmed that the earliest adopters are heavy product category users with extensive product experience (Blake, Neuendorfb, & Valdiserric, 2005; Chau & Hui, 1998; Citrin et al., 2000; Danko & Maclachlan, 1983; Dickerson & Gentry, 1983; Eastlick & Lotz, 1999; Engel et al., 1969; Foxall, 1993, 2007a; Gatignon & Robertson, 1985; Goldsmith et al., 2003; Munnukka, 2007; Robertson, 1971; Robertson & Kennedy, 1968; Taylor, 1977) and extensive product knowledge (Engel et al., 1969; Goldsmith et al., 2003). For example, consumers' decisions to adopt TV shopping are largely influenced by their previous experiences of other types of non-store shopping (Eastlick & Lotz, 1999), consumers with higher Internet experience are more likely to adopt Internet shopping (Blake et al., 2005), and consumers with higher computer experience are likely to buy a new IT product earlier than others (Chau & Hui, 1998). Given the importance of experience and knowledge constructs for predicting new product adoptions, some have proposed using product knowledge and experience dimensions to segment consumers into adopter categories (Saaksjarvi, 2003).

Although some studies do suggest that large amounts of experience can in fact negatively influence adoption probability (Alpert, 1994; Moreau, Lehmann, & Markman, 2001; Peracchio & Tybout, 1996; Wood & Lynch, 2002), this may again be interpreted as evidence in support of the BPM argument on the importance of the *nature* of experience. That is, it can be that for highly experienced consumers, the reported reduced adoption likelihood has been caused not by a large amount of experiences *per se* but by their negative learning history. For example, Alpert (1994) found that accumulation of innovative behaviour experience may result in innovative behaviour extinction. Specifically, he argued that consumers, who initially behave innovatively, sooner or later stop buying new products because they are disappointed by an innovation's performance. Although in his discussion, the consequences of previous adoptions were negative (accumulation of unnecessary products, disappointments in performance), a logical extension of his view would be to say that if consumers are, in fact,

not disappointed but rather satisfied with their purchases, the tendency to behave innovatively in that product domain may strengthen.

Further, moving from general discussion of the role of past experiences in opt-in choice to more specific points, it can be argued that both the experiences with m-advertising and experiences with m-advertiser can be gained through many different sources. That is, people can collect experiences themselves through interacting with the service and the company personally, i.e. through *direct experience*. Consistent with this, direct experiences have proven to exert a strong influence on m-advertising choice (Barnes & Scornavacca, 2008; Jayawardhena et al., 2009; Karjaluoto, Jayawardhena, et al., 2008; Kautonen et al., 2007).

Consumers can also learn about the service and the company through their personal networks, which most often is referred to as *indirect shared experience.* These inter-personal types of experiences also directly influence m-advertising choice (Jayawardhena et al., 2009; Karjaluoto, Jayawardhena, et al., 2008; Kautonen et al., 2007).

In addition, consumers can gain information about both m-advertising and potential m-advertisers through various media sources, which is commonly referred to as *media experiences*. Just like personal and shared experiences, media experiences too have proven highly relevant to m-advertising choice prediction (Jayawardhena et al., 2009; Karjaluoto, Jayawardhena, et al., 2008; Kautonen et al., 2007). Although just like shared word-of-mouth experience, media experience is also indirect in the sense that the viewer gains information from secondary sources, it should nevertheless be distinguished from common indirect experience as it does not involve actual communication and the information source does not hold any particular authority or significance for the information recipient. That is, whereas information transferred through personal communication usually comes in a natural informal context from a person whom the recipient knows and often trusts, a shared knowledge is likely to have a different effect on consumers than the impersonal information from media supplied without any specific context. With this in mind, this thesis proposes further sub-categorising past experiences with both m-advertising and m-advertiser into direct, indirect and media (Jayawardhena et al., 2009; Karjaluoto, Jayawardhena, et al., 2008; Kautonen et al., 2007).

Consistent with this, the innovation adoption literature provides substantial support for the effect of direct experiences on future adoptions (e.g. Alpert, 1994; Blake et al., 2005; Chau & Hui, 1998; Citrin et al., 2000; Engel et al., 1969; Goldsmith et al., 2003; Munnukka, 2007). With regard to the indirect experiences, their role in innovation adoption is effectively

captured in the idea of interpersonal communication being one of the main forces driving diffusion (Bass, 1969; Mahajan, Muller, & Bass, 1990; Rogers, 1962, 1995). The bandwagon learning theories, which posit that as innovation spreads, non-adopters learn about its benefits through observing previous adopters (Abrahamson & Rosenkopf, 1997; Valente, 1996), also demonstrate the importance of people's indirect or shared experiences in their adoption behaviours. Supporting this view, both micro-modeling diffusion studies (Chatterjee & Eliasberg, 1990) and macro-examinations of diffusion determinants (Kumar, Ganesh, & Echambadi, 1998) have emphasised the role of indirect experiences in innovation adoption. For example, Kumar et al. (1998) found that innovations diffuse faster in countries where they are introduced relatively late, which suggests the importance of indirect experiences in innovation takeoff- i.e. lagging countries may learn about the innovations from prior adopters (countries). As for the media experiences, this construct is clearly present in the original innovation diffusion models (Bass, 1969; Mahajan, Muller, & Bass, 1990; Rogers, 1962, 1995), where innovations spread through both word-of-mouth and mass media communication channels. Thus, each of the proposed three sub-types of experiences is also justified from the innovation adoption perspective.

Finally, with these three types of experiences towards two objects – m-advertising and m-advertisers – are these experiences equally important in opt-in prediction? If they are not, where do the differences lie and how can one understand these differences, considering that each individual might have his/her own priority hierarchy?

To understand possible differences in the importance of these six types of experiences, this thesis proposes incorporation of a weight measure for each kind of experience analysed. The general logic is that both m-advertising (Jayawardhena et al., 2009; Karjaluoto, Jayawardhena, et al., 2008; Kautonen et al., 2007) and innovation diffusion literature (Bass, 1969; Gatignon & Robertson, 1985; Lafferty, Goldsmith, & Flynn, 2005; Mahajan, Muller, & Bass, 1990; Midgley, 1977; Midgley & Dowling, 1978; Olshavsky & Spreng, 1996) have indicated that consumers tend to have different levels of reliance on different kinds of experiences. Specifically, in the m-advertising field, variations have been found in the relative importance of different types of past experiences in consumer opt-in willingness (Jayawardhena et al., 2009; Karjaluoto, Jayawardhena, et al., 2008; Kautonen et al., 2007).

While previous m-advertising only hint at the possibility that different types of experiences can have different relative weights, innovation diffusion literature strongly suggests such variations (Bass, 1969; Gatignon & Robertson, 1985; Lafferty et al., 2005; Mahajan, Muller, & Bass, 1990; Midgley, 1977; Midgley & Dowling, 1978; Olshavsky & Spreng, 1996). In

particular, according to the Bass diffusion theory (Bass, 1969; Mahajan, Muller, & Bass, 1990), innovators adopt new products independently, relying primarily on mass media information, whereas the choices of later adopters are mainly determined by interpersonal information. Independence in making adoption choices has been named as one of the defining characteristics of innovators (Midgley, 1977; Midgley & Dowling, 1978). In line with this, other studies report that innovators, as opposed to later adopters, are not influenced by the endorser's expertise when making adoption choices (Lafferty et al., 2005) and that later adopters, unlike their more innovative counterparts, often seek help from others prior to adopting innovations (Olshavsky & Spreng, 1996). In the same vein, Gatignon and Robertson (1985, p.849) state that "individuals have different propensities for relying on mass media or word-of-mouth communications". Taken together, this evidence clearly suggests the need for construct to account for reliance, in the analysis of consumer learning histories. Therefore, this thesis further proposes incorporation of the reliance variable as a measure of the relative weights of each type of experience in the opt-in choice.

To summarise, this study examines consumer experience with both the m-advertising and m-advertisers on these three levels, yielding six types of experiences: (1) direct experience with m-advertising; (2) direct experience with the m-advertiser; (3) indirect experience with m-advertising; (4) indirect experience with the m-advertiser; (5) media experience with m-advertising; and (6) media experience with the m-advertiser. To measure their relative strengths, each of the six types of experiences listed above is supplemented by respective measure of individual reliance. Therefore, the learning history construct in this thesis includes a total of six types of experiences, each having its own measure of relative weight (i.e. reliance).

Based on this discussion, the next proposition can be put forward:

> **P2.1:** *Different types of past experiences comprising individual learning history will significantly influence m-advertising opt-in choices.*

2.3.2.4 Culture as a Part of Individual Learning History

As argued earlier, in the m-advertising context, individual learning history should be interpreted in terms of an individual's past experiences with either m-advertising or an m-advertiser. However, the analysis of its influences on opt-in choice would be incomplete without considering the broader cultural context in which these experiences are accumulated. This section therefore discusses this important element of learning history, which cannot be

categorised as relevant experience *per se*, but rather as a more indirect background factor framing the process of experience accumulation throughout one's lifetime. From this follows both the need to include culture variables into the analysis and the need to discuss cultural influences separately from other learning history components.

From the moment a person is born until the moment he/she starts actively interacting with the environment, culture is nothing more than a behaviour setting. It includes the people living in one's community, the food they eat, their lifestyle, etc. As people grow up, however, they start following the way of living life typical of their culture and gradually become a part of it, adopting more and more culture-governed behaviours over time. For example, a child born in a community, where laughing loudly is considered bad manners, will gradually learn about this norm through continuous trials and punishments, as well as through observing behaviours of other community members and listening to their verbal instructions. In other words, from being a merely an outsider initially only observing, by the time the person grows up, through the process of experience accumulation, he/she adopts it as an own way of living. Therefore, in behaviourist terms, an adult's culture-governed behaviours should be understood as *learned* behaviours or a part of learning history (Glenn, 2004; Onkvisit & Shaw, 2004, p.155).

The literature provides rich empirical evidence of cultural influences on consumer behaviour both in retail (e.g. Kacen & Lee, 2002; Shukla, 2010) and advertising contexts (Alden, Wayne, & Lee, 1993; Han & Shavitt, 1994; Lim & Ang, 2008; Taylor, Miracle, & Wilson, 1997; Zhang & Gelb, 1996). For example, the consumer regional culture (collectivism or individualism) is known to moderate the influence of personality traits on consumer impulse buying, with consumers from collectivistic societies being less influenced by impulsiveness in their buying choices than their individualist counterparts (Kacen & Lee, 2002). Culture also greatly influences consumer consumption of status goods – whereas western consumers tend to mainly focus on self-esteem when buying such goods, eastern consumers' status buying is mostly driven by the desire to impress others (Shukla, 2010). In an advertising context, culture affects consumer reactions to humorous advertisements (Alden et al., 1993) as well as their responses to the level of information in advertisements (Taylor et al., 1997), and their general preference for advertised utilitarian products (Lim & Ang, 2008). Given the importance of culture in influencing consumer behaviour toward advertising, a common recommendation is a focus on achieving congruence between advertising appeals and cultural values to increase advertising effectiveness (Zhang & Gelb, 1996).

In line with the above argument, the role of culture has also been repeatedly stressed in innovation adoption literature (Chandrasekaran & Tellis, 2008; Gatignon, Eliashberg, &

Robertson, 1989; Harris et al., 2005; Kumar et al., 1998; Michaut, 2009; Steenkamp, Hofstede, & Wedel, 1999; Sundqvist, Frank, & Puumalainen, 2005; Takada & Jain, 1991; Tellis, Stremersch, & Yin, 2003; Tellis, Yin, & Bell, 2009; Yalcinkaya, 2008). On a macro-level, empirical studies have shown that various cultural dimensions, for example, culture context (high context versus low context cultures) and level of individualism, largely influence national innovation adoption speeds (Gatignon et al., 1989; Kumar et al., 1998; Steenkamp et al., 1999; Takada & Jain, 1991); an argument which is also supported in conceptual works (e.g. Yalcinkaya, 2008). To add to this macroeconomic view, studies that took a micro-perspective on this issue have also provided evidence in support of the influence of culture on adoption choice (e.g. Lee, Kim, Lee, & Kim, 2002; Lerner & Keltner, 2000). For example, Lee et al. (2002) find that consumers in Korea and Japan have different structures of value priorities and derive satisfaction from different aspects of mobile internet usage. Along the same lines, Choi et al. (2008) looked at cross-cultural differences in Korea and America in perceived value of mobile advertisements, attitudes towards mobile advertising and purchase intentions, and discovered that all three constructs, as well as their antecedents, are culture-dependent. Similar differences in innovation perceptions were found between French and French Canadian consumers (Chtourou & Souiden, 2010).

In line with the above evidence on the importance of culture, culture is also an important factor influencing opt-ins in an m-advertising context. (Choi et al., 2008; Jayawardhena et al., 2009; Karjaluoto, Jayawardhena, et al., 2008; Karjaluoto, Lehto, et al., 2008; Kautonen et al., 2007; Muk, 2007a, 2007b). For example, several scholars investigated consumers' intentions to adopt mobile advertising in Finland, Germany and the UK and found that willingness to accept mobile advertising not only varies across countries but also within each country adoption intentions are predicted by different factors (Jayawardhena et al., 2009; Karjaluoto, Jayawardhena, et al., 2008; Kautonen et al., 2007). Similarly, Baldi and Thaung (2002) analyse the reasons why mobile WAP service has failed in Europe while its analogue i-Mode has achieved a tremendous success in Japan and name cultural factors as one of key reasons for this difference. Importantly, despite growing interest in the effect of culture on opt-ins and the evidence in support of this argument, the existing cross-cultural literature on m-commerce in general and m-advertising in particular is still not sufficiently developed in comparison with other research fields (Harris et al., 2005, p.212; Ngai & Gunasekaran, 2007, p.10; Varnali & Toker, 2010, p.140).

Given the evidence of the role of culture in shaping consumer behaviours in diverse fields, it is necessary to establish how this construct can be used to explain opt-in behaviours. In particular, since culture is a complex and multidimensional construct (Hofstede, 1991) the

key question is what criteria to use for specifying consumers' culture. A conventional practice is either to rely on the concept of national culture as defined by Hofstede (1991) and specify culture characteristics based on commonly used cultural dimensions (e.g. individualist or collectivist) or to use a more general West-East distinction. However, largely due to globalisation, the definition of culture has now expanded beyond a traditionally used "national culture" and culture is no longer "a characteristic of individual or a nation but a large number of people conditioned by similar background, education, and life experiences" (Doney, Cannon, & Mullen, 1998, p.607). Therefore, instead of relying on cross-country or West-East differences, this thesis specifies cultural contrast based on the differences in *shared histories* of societies. The argument is that despite the presumed cross-country and West-East distinctions, people can still display similar behaviours due to a shared historical past. For example, if one takes population of the former Soviet Union, which consisted of millions of people from both East and West all having different ethnicities, it would be logical to expect them to behave similarly in many respects due to their long history of living in the same country. Today, classifying post-Soviet people into different cultures based on country or West-East profiles would mean disregarding their common past, which even now is still strongly affecting their behaviours (e.g. Wells, 1994).

Further, upon explaining the general approach to separating cultural groups, it is necessary to specify which cultural groups this thesis focuses on. In line with the above argument, the thesis seeks to contrast people from post-Soviet countries with people from the Western world. The argument is that consumers with a post-Soviet cultural background are in many respects different from consumers with a Western cultural background, mainly because of historical differences. Although without a doubt, certain *intra*-cultural differences do exist both among post-Soviet and Western people, in a broad sense, such within-cluster differences are relatively insignificant compared to the major differences between these two cultural clusters.

There are two reasons behind the argument that the Western and post-Soviet people have distinctly different cultures. These are each country's history and their geographic proximity, both factors commonly referred to in literature as culture shaping (Harris, 1979; Ronen & Shenkar, 1985). To elaborate, historically, at least during the Soviet era, USSR member states remained politically and economically isolated from Western influences, which naturally led the two groups of countries to develop independently and in different directions. If one considers the duration of this isolation period, the historical reason behind the cultural differences between the two country clusters becomes even more meaningful. As a result of this long history of isolation, behaviours of people from post-Soviet countries still remain

very different from those of Western people, even twenty years after the collapse of the USSR (e.g. Ralston, Holt, Terpstra, & Kai-Cheng, 2007; Wells, 1994).

Although some may be sceptical about such persistent differences and argue that the situation should have changed long ago, making post-Soviet people more and more westernised, the fact remains that from a historical perspective, twenty years is a too short time period for any significant changes to occur in culture and in people's mentality. If one takes the assimilation of Japanese people in the USA, for instance, which is another example of a sudden cultural change, the evidence shows that it took Japanese people at least three generations (more than 100 years) to attain the cultural identity of their new country of residence, even when being fully immersed into the new cultural context (Montero, 1981). In this light, the argument that the past twenty years after the USSR collapse could not have affected people's culture seems even more pertinent. To add to this, in contrast to assimilation, the USSR collapse did not entail a sudden change of social and physical environment – that is, they physically remained in the same area surrounded by the same people. Taking this into account, it is logical to argue that cultural changes caused by the collapse of the USSR may take even longer to happen than those in the case of assimilation.

With regard to the argument that cultures remain different due to geographical proximity, the logic is even more straightforward and can broadly relate to the West-East distinction. Close geographical proximity between countries in the Western region and countries in the post-Soviet area naturally promoted economic and trade relations, which led to similar product ranges and consumption patterns. In addition to the implications for international relationship, geographical proximity between both groups of countries determined their climatic conditions and thus had a defining influence on people's lifestyles. Thus, on the whole, the above argument justifies broadly classifying people from the former USSR countries into the post-Soviet culture and contrasting them to Western people.

Hence, consistent with the substantial evidence on the importance of culture in consumer choice in a wide range of contexts, it is therefore proposed:

> **P2.2:** *M-advertising opt-in choices would differ between Western and post-Soviet consumers.*

2.3.3 Behaviour Consequences

In behaviourist theory, human behaviour is guided by the principle of pleasure and pain. Behaviours which provide pleasure and satisfaction will be repeated whilst those causing pain and discomfort will be avoided. Therefore, behavioural consequences, both reinforcing and punishing, determine the rate of occurrence of similar behaviours in future (Foxall, 1990, 1997a). According to the BPM (Foxall, 1990, 1997a), utilitarian reinforcement consists of the functional benefits of buying, using and possessing products. The concept of utilitarian reinforcement can also include hedonic benefits of consumption, as "it derives not only from the functional performance of a product or service but from the feelings associated with owning and consuming it" (Foxall, 1997a, p.82). Informational reinforcements are more concerned with verbal feedback on consumer's behaviour and can be public (social recognition) or private (self-feedback) (Foxall, 1997a, p.83). Punishments or aversive consequences can also be of two types: utilitarian (e.g. economic cost, inconvenience, dissatisfaction) and informational (e.g. social disapproval) (Foxall, 1990, 1997a).

Based on the levels of significance of utilitarian and informational reinforcements, behaviours are classified into four operant classes (Foxall, 1997a, 2007a) (**Figure 4**). According to this classification, behaviours that are maintained by high levels of both utilitarian and informational reinforcements belong to the so-called 'Accomplishment' group. For example, the purchase of classical art is maintained both by the personal pleasure afforded by owning it, and the informational benefit of impressing others. "Pleasure" behaviours are associated with high utilitarian and low informational reinforcements. This may be, for example, the purchase of a video game to play at home. 'Accumulation' behaviours include image-oriented consumption. Conspicuous buying is a good example of this type of behaviour. Finally, 'Maintenance' is a routine habitual consumption that neither results in personal satisfaction nor increases social recognition (Foxall, 1997a, 2007a).

	High Utilitarian Reinforcement	Low Utilitarian Reinforcement
High Informational Reinforcement	ACCOMPLISHMENT	ACCUMULATION
Low Informational Reinforcement	HEDONISM (PLEASURE)	MAINTENANCE

Figure 4: Operant classes of consumer behaviour

Source: adapted from Foxall (2007a, p.10)

The following section further discusses each type of behaviour consequence separately and proposes an interpretation for them in the m-advertising opt-in context.

2.3.3.1 Utilitarian Reinforcements

Utilitarian reinforcements are defined as "all of the benefits derived directly from the possession and application of a product or service" (Foxall, 1997a, p.82). Examples of utilitarian reinforcement may potentially include pleasure derived from a shopping activity, the actual benefit derived from the product purchased, a complimentary discount voucher received at the till for future shopping and any new knowledge gained in the process. Thus, utilitarian reinforcements should be understood as all those rewarding functional and hedonic consequences of consumer behaviour, which reinforce similar behaviours in future (Foxall, 1990, 1997a).

The influence of utilitarian benefits on consumer behaviour has long been recognised (e.g. Babin, Darden, & Griffin, 1994; Batra & Ahtola, 1990; Dhar & Wertenbroch, 2000; Hirschman & Holbrook, 1982). For example, it has long been known that shopping may produce *functional* as well as *hedonic* rewards (Babin et al., 1994); meaning that people can derive satisfaction from both the direct benefits associated with purchasing and from the process of shopping itself (e.g. from exploring the shop's assorted goods, trying new styles and socialising with others). In line with this, consumers are known to engage in purely 'consummatory' (hedonic) and 'instrumental' (utilitarian) types of consumption (Batra & Ahtola, 1990). Other examples of utilitarian benefits include strengthening relationships with others or what Holt (1995) refers to as "consumption as a play". For example, going to a shopping mall with a date may afford this kind of social utility, as people can socialise and learn about each other's preferences when spending time shopping together. Since the concept of utilitarian reinforcement includes all types of functional and hedonic benefits, the benefit of strengthening relationships with others should certainly be interpreted as another kind of utilitarian reward.

Furthermore, in support of the BPM proposition, innovation adoption literature also provides evidence regarding the importance of utilitarian rewards in the case of consumers' innovation adoption choices. Specifically, in the innovation diffusion theory, the relative advantage of innovation is defined as "the degree to which an innovation is perceived as being better than the idea it supersedes" (Rogers, 1995, p.229) and this is posited to increase the rate of innovation adoption (Rogers, 1995; Rogers & Shoemaker, 1971). It can therefore be argued that innovation adoption choice is largely advantage-directed, which closely relates to the BPM concept of utilitarian benefits. Similarly, in the Technology Acceptance Model (TAM)

and its later extensions (Davis, 1989; Davis et al., 1989; Venkatesh, 2000; Venkatesh & Bala, 2008; Venkatesh & Davis, 2000a; Venkatesh et al., 2003), the idea of utilitarian reinforcements is represented in the form of innovation usefulness, which directs new product acceptance. In line with these theoretical propositions, empirical studies based on Innovation Diffusion Theory and TAM have also consistently confirmed the roles of relative advantage and product usefulness in innovation adoption (Chtourou & Souiden, 2010; Flight, Allaway, Kim, & D'Souza, 2011; Holak & Lehmann, 1990; Hong & Tam, 2006; Li, Glass, & Records, 2008; Mallat et al., 2009; Ostlund, 1974; Porter & Donthu, 2006; Tornatzky & Klein, 1982; Verhoef & Langerak, 2001). Along the same lines, other empirical studies into adoption choice have found innovation adoptions to be personal outcome-directed (Fisher & Price, 1992), fun-directed (Chtourou & Souiden, 2010), and enjoyment- and value-directed (Hong & Tam, 2006), which again serves to support the importance of utilitarian reinforcements for predicting the innovation adoption choice.

Besides the intangible kinds of utilitarian reinforcements discussed above, innovation adoption literature also provides support for the effectiveness of more concrete utilitarian reinforcements, such as monetary incentives (Song & Parry, 2009) and free product samples (Lammers, 1991). Specifically, Song and Parry (2009) compare the relative effectiveness of four types of monetary incentives designed to stimulate demand for a new DVD player: discount coupons, cash incentives requiring a visit to the store, cash incentives for viewing in-store product demonstrations, enhanced money-back guarantees, and complementary gifts. The results of their field experiment demonstrated that all the types of monetary incentives used had a strong influence on new product adoptions, as well as on store visits and price paid for the promoted product (Song & Parry, 2009). Similarly, an experiment was conducted by Lammers (1991) and demonstrated that sales of a new chocolate brand can be effectively stimulated through a free samples give away.

Concepts of utilitarian reinforcements and punishments are also discussed in mobile services contexts. For example, in various mobile information services contexts (weather forecasting, mobile parking services, gaming, etc), consumers' use intentions are affected by "utilitarian reinforcements" and "hedonic reinforcements" (Van der Heijden, Ogertschnig, & Van der Gaast, 2005) as well as by more general concepts of usefulness (Hong, Thong, Moon, & Tam, 2008; Nysveen & Pedersen, 2003; Nysveen, Pedersen, & Thorbjørnsen, 2005a, 2005b) and enjoyment (Hong et al., 2008; Nysveen et al., 2005a, 2005b). Similarly, in m-commerce, consumer adoptions are also driven by utilitarian benefits such as 'enhanced communication features', 'flexibility' and 'convenience and handiness' (Anckar, Carlsson, & Walden, 2003).

Taken together, the above evidence, from both general consumer behaviour literature and innovation adoption research, strongly suggests that m-advertising opt-in choice is likely to be positively influenced by utilitarian reinforcements. The main question therefore relates to what constitutes utilitarian reinforcements in the m-advertising context and whether the interpretation of utilitarian reinforcements should be adapted from other application contexts. In this regard, this thesis would argue that although some utilitarian benefits in the chosen context will generally be similar to utilitarian rewards in more common application contexts, there will also be several factors specific to m-advertising.

To elaborate, as in other contexts, such as in traditional forms of advertising, utilitarian benefits in m-advertising should be understood in terms of the *usefulness* and *entertaining capability* of the supplied information. For example, for a person who is interested in attending a dance show, an m-advertisement containing a map with detailed information on where to buy the tickets and how to get to the event venue would be useful in practical terms as it would facilitate both the process of seat reservation and the journey. As far as the entertaining capability of advertisements is concerned, an illustrative example would be an m-advertisement in a game or interactive application format as recipients wiould be able to derive benefit not only from the information content but also from the process of using it. In support of the proposed interpretation of utilitarian rewards, previous m-advertising research also confirms the importance of both the information utility (Bauer et al., 2005; Merisavo et al., 2007; Okazaki, 2004; Tsang et al., 2004; Yermekbayeva & Xiao, 2011; Zhang & Mao, 2008) and the entertainment utility of m-advertising (Bauer et al., 2005; Merisavo et al., 2007; Okazaki, 2004; Tsang et al., 2004; Xu, 2006-2007; Yermekbayeva & Xiao, 2011; Zhang & Mao, 2008) in terms of consumer opt-in choice.

In relation to m-advertising's usefulness and m-advertising's entertaining capability, it is also important to note the duality of these concepts. As was previously detailed in the earlier discussion regarding physical setting, these factors can be described as information relevance and entertaining content, respectively. The argument above is not supposed to refute the previous claim, but rather to provide a different angle to the issue. This thesis argues that both the usefulness and the entertaining capability, which are in essence physical factors related to content (i.e. the actual content such as game or relevant information), can produce utilitarian benefits to recipients (i.e. amusement from playing a game and practical benefit from relevant information). Therefore, both factors are additionally interpreted in this section as utilitarian reinforcements.

Continuing the discussion of what interpretation of utilitarian reinforcement should entail in the chosen context, this thesis proposes that just as in the context of common consumption (Lammers, 1991; Song & Parry, 2009), an opt-in choice can be reinforced by *economic rewards*. To be more specific, in some situations, people may be persuaded to opt-in as a result of cash incentives and in some cases, their choice may be influenced by indirect monetary benefits, such as discount coupons or discounted mobile services. This interpretation of utilitarian reinforcements is consistent with previous studies on subscription choice (Barwise & Strong, 2002; Leek & Christodoulides, 2009; Rettie & Brum, 2001; Yermekbayeva & Xiao, 2011). In particular, m-advertising research has shown that monetary incentives such as cash (Barwise & Strong, 2002), *discount vouchers* (Leek & Christodoulides, 2009; Rettie & Brum, 2001) and *discounted phone calls* (Rettie & Brum, 2001; Tsang et al., 2004) effectively stimulate opt-ins. This argument also finds support in conceptual studies (Krishnamurthy, 2001) as well as in those studies based on real-life campaigns (Barwise & Strong, 2002; Rettie et al., 2005). In the case of Barwise and Strong (2002), who conducted a field experiment where participants were rewarded with fixed sign-up incentives and received an additional payment for every m-advertisement received, financial incentives were found to effectively stimulate m-advertising opt-ins. Similarly, Rettie et al. (2005) analysed archive data from a previous advertising campaign and also found a strong correlation between financial incentives and m-advertising acceptance.

Moving on from universally applicable utilitarian factors such is usefulness, entertaining capability and economic rewards, to utilitarian factors specific to the m-advertising context, this thesis would argue that one such unique utilitarian factor is the *benefit of socialisation.* As suggested by Holt (1995), some types of consumption are relationship-directed in the sense that they help people to derive utility from interacting with others and strengthening the bonds between relationships. It can be argued that m-advertising would fall into this group of behaviours as subscribers can use m-advertising information for their everyday communication (e.g. small talk, sharing interesting information) and for planning social gatherings (e.g. "I received a 2 for 1 cake offer from Starbucks. Let us go there for a treat!"). Consistent with this argument, previous studies into consumer m-advertising choice also find the benefits of socialisation to be an important choice determinant (Bauer et al., 2005; Peters et al., 2007; Yermekbayeva & Xiao, 2011; Zhang & Mao, 2008).

Subsequently, since the information-receiving device is mobile, m-advertising also offers intrinsic *mobility/convenience* benefit. That is, subscribers always have information from m-advertisements with them and can easily access this at any time. This benefit is especially important with mobile coupons and discount codes sent in the form of m-advertisements,

because storing them in a mobile phone not only minimises the possibility of not having them at hand when needed, but also eliminates the need to print them off and carry them around. Another aspect of the mobility/convenience benefit is that with m-advertising it is not necessary to access discount coupons via email, which in many situations can be problematic, due to associated inconvenience and time pressures (e.g. having a long queue behind waiting for you to finish the transaction). Also, content mobility allows enables access to information on the move, which, in certain situations, may again prove an important advantage. For example, if a consumer is on the way to a shopping mall planning to buy a gift for a friend, receiving information about a new collection of sweaters made by the friend's favourite brand would certainly be useful. Importantly, this aspect of the mobility/convenience benefit is specific only to m-advertising, as all other types of advertising would normally either be inaccessible while on the move or require relatively more effort (e.g. searching for this information in the Internet). Therefore, the benefit of mobility/convenience is another important utilitarian factor to consider in the opt-in choice prediction. In line with this argument, previous m-advertising research also supports the importance of the convenience value in the case of m-advertising choices (Pura, 2005; Yermekbayeva & Xiao, 2011).

Another unique benefit offered by m-advertising is *the benefit of improved personal effectiveness*. That is, provided that m-advertisements are timely and informative, people can benefit from receiving the information they need at the right time and thus execute shopping activities more effectively. Referring to the earlier example with m-advertisements about sweaters received on the way to the shopping centre, it can be argued that in such situations, m-advertisements not only provide the mobility/convenience advantage but also help to plan shopping more effectively. In other words, in that situation, the m-advertisement has practically directed the consumer's choice from the start, thus saving him/her both the effort and time. This argument on the importance of personal effectiveness benefit is consistent with previous research (Laszlo, 2009, p.30; Peters et al., 2007; Yermekbayeva & Xiao, 2011).

Finally, again stemming from the mobility characteristics of m-advertising content, in some situations, use of m-advertising can also provide an additional benefit option for *relieving boredom*. For example, in the airport departure lounge, when otherwise unoccupied, people may download use ad-funded applications and games or subscribe to other interactive m-advertising services such as a location-based shop and sightseeing advertising in their destination country. Other situations where such benefit is likely to prove an important opt-in determinant include standing in a long queue, waiting for a doctor's appointment and having long train or coach journeys. The argument that relieving boredom is an important factor

influencing-advertising opt-in choice is also supported by other m-advertising studies (Laszlo, 2009, p.30; Peters et al., 2007; Yermekbayeva & Xiao, 2011).

In conclusion, after having specified the proposed interpretation of utilitarian reinforcements in the m-advertising context, it is necessary to note that although the original notion of utilitarian rewards is based on actual behaviour consequences, in the new product market, where the subject matter is a *first* product trial, this would hold little meaning. In other words, if one uses the raw concept of utilitarian reinforcement, the behaviour analysis can only be done retrospectively, *after* the behaviour has occurred. While using actual past consequences is perfectly acceptable in common consumption contexts (e.g. grocery shopping can be predicted through consequences of past product consumption), when the research focus is related to an initial trial, where there are no actual behaviour consequences to rely on, the conventional BPM approach to specifying utilitarian reinforcements will be unlikely to be applicable. But what can a legitimate solution be in this case?

Regarding the operationalisation of the construct of behaviour consequences, this thesis relies on the notion of consumer rules which are related to behavioural consequences. To elaborate, in terms of radical behaviourism, *rules* are "verbal descriptions of the [behaviour] contingencies" (Foxall, 1995c, p.37). When the consequences of behaviour are unknown, rules serve to outline the behavioural consequences and thus guide the behaviour. Rules can come either from other people (e.g. "When in the UK, look right first when crossing a road") or from the self (e.g. "I should never eat that much chocolate again"). The behaviours guided by such rules are therefore not contingency-shaped but rule-governed (Foxall, 1995c). Since many consumer behaviours are rule-governed (Foxall, 1995c), the use of this concept to investigate the influence of behaviour consequences in a new service domain should not be viewed as contradictory to the principles of the BPM. Therefore, in the m-advertising context, since consequences are unknown, the concept of behavioural consequences should be understood in terms of rule-governance. That is, in this thesis, opt-in behaviours are interpreted as fun-*directed*, pleasure-*directed* or practical benefit-*directed;* all terms referring to rules directing choice to attainment of utilitarian benefits.

To summarise, the evidence from previous research strongly suggests that the m-advertising opt-in choice is likely to be positively influenced by utilitarian reinforcements. The proposed interpretation of utilitarian reinforcement in m-advertising includes: (1) information usefulness; (2) hedonic benefit; (3) economic rewards for opt-in; (4) socialisation benefit; (5) mobility/convenience benefit; (6) the benefit of improved personal effectiveness, and (7) the benefit of relieving the boredom. Since the focus of the inquiry is on predicting consumer

behaviours towards the new service, all of the above interpretations of the utilitarian reinforcement are only analysed at the rule-governance level and are thus operationalised as rules or consequences that direct the opt-in choice.

2.3.3.2 Informational Reinforcements

According to the BPM, informational reinforcements are rewards that originate from "specific feedback on the performance or achievement of the individual which influences the rate at which that performance continues" (Foxall, 1994a, p.39). This feedback can come in two forms: either from the self ("My lasagna was so popular at the dinner, I have done a good job!") or from others ("He has rapidly excelled in his career in just one year, he must be very smart") (Foxall, 1994a, p.39). In both cases informational reinforcement signals "not only the economic rationality but, more particularly, the wider socio-economic ramifications such as status, prestige and social acceptance" (Foxall, 1994a, p.39). In this view, conspicuous and status consumption can be said to be mainly informationally reinforced because by engaging in these behaviours consumers increase their self-esteem and also signal their prestige to others (Fitzmaurice & Comegys, 2006).

Further, an important distinction between utilitarian and informational reinforcements lies in their origins. Whereas utilitarian reinforcements are biologically-based and are thus considered primary, informational reinforcements are socially conditioned (i.e. social rules define what is good and what is bad) and are therefore secondary (Foxall, 1994a, p.40). For this reason, whereas utilitarian reinforcements can be considered in isolation from societal influences, the understanding of informational rewards can only be achieved with consideration for the social context in which these rules are specified. Therefore, according to Foxall (1994a, p.40) the concept of informational reinforcements is also intrinsically linked to the social rule-governance.

Consistent with the idea of informational reinforcement, a number of studies have provided evidence of its effect on consumer behaviour (e.g. Amaldoss & Jain, 2005; Chao & Schor, 1998). An illustrative example of informationally reinforced consumption is given by Chao and Schor (1998) who analyse women's consumption of different cosmetic products and find that whereas for facial cleaners, which are least visible products, the price-demand relationships follow a usual pattern, for lipstick, the product consumed publicly, the demand curve is upward-sloping. This finding suggests that the consumption of socially visible goods, such as women's lipstick, is largely affected by status considerations; or, in behaviourist terms, are informationally reinforced. Along the same lines, Amaldoss and Jain (2005) find that snobs engage in conspicuous consumption only when there *are* followers to impress and

that in markets consisting *only* of snobs, the relationship between price and demand is steadily negative, which again serves to prove the importance of social feedback in consumption choices. In conjunction with this, it has also been reported that markets where innovation is socially visible, as opposed to markets where innovation is a product for private use, social rules have stronger effects on innovation adoptions (Fisher & Price, 1992; Kulviwat, Bruner, & Al-Shuridah, 2009).

Generally, conspicuous or informationally-reinforced consumption can be classified into three types: consumption to express uniqueness, consumption to achieve social status and consumption to indicate affiliation to a specific social group (c.f. Gierl & Huettl, 2010). There is extensive evidence in support of consumption to express social identities (Belk, 1988; Berger & Heath, 2007; Kleine, Kleine, & Kernan, 1993; Richins, 1994), consumption to enhance social standing (Chao & Schor, 1998; Fitzmaurice & Comegys, 2006; Shukla, 2010), and conformity/affiliation consumption (e.g. Lascu & Zinkhan, 1999). Literature also supports the BPM position that consumption can be reinforced by feedback from other people and oneself – i.e. whereas some people engage in status consumption to increase self-esteem others are driven by impressing others and improving their position in the social hierarchy (Shukla, 2010). Since each of these types of consumption is related to social feedback on behaviour they can all be interpreted as examples of informationally reinforced behaviours.

Support for the influence of informational factors on consumer behaviour can also be found in innovation adoption literature (e.g. Black, Lockett, Winklhofer, & Ennew, 2001; Flight et al., 2011; Holak & Lehmann, 1990; Moore & Benbasat, 1991; Ostlund, 1974; Rogers, 1995; Rogers & Shoemaker, 1971). The most important indicator of such effects lies in the innovation diffusion theory itself, where adoption rate is largely driven by the five innovation attributes, two of which: relative advantage and observability, clearly reflect the notion of informational reward (Rogers, 1995; Rogers & Shoemaker, 1971).

To be more specific, the concept of the relative advantage includes not only evident practical benefits but also status-related advantages of buying an innovation (Rogers, 1995; Rogers & Shoemaker, 1971). For example, buying a new Smartphone will not only result in the immediate practical benefits of having more advanced features but can also improve one's social status, which includes both the associated prestige of having the latest Smartphone model and the benefit of being one of the first few people to own this product. Although originally, both utilitarian and informational benefits, despite being clearly different, were united in the relative advantage construct (Rogers, 1995; Rogers & Shoemaker, 1971), the construct was later divided into two respective factors: functional benefits and image benefits (Moore & Benbasat, 1991). This distinction again serves to confirm the logic of the BPM.

As far as observability is concerned, it is defined as "the degree to which the results of an innovation are visible to others" and is also posited to positively influence adoptions (Rogers, 1995). As evident from its definition, this concept also reflects the idea of informational reinforcement in the BPM. Later empirical studies, which investigated the effects of relative advantage (including image benefit) and observability, confirmed their influence on adoption choice (Black et al., 2001; Flight et al., 2011; Holak & Lehmann, 1990; Ostlund, 1974).

In the m-advertising context, so far, academic studies have only briefly addressed the notion of informational rewards, mainly focusing on the prestige associated with using m-advertising (Pura, 2005). In particular, Pura (2005) introduced the concept of social value which is very similar to the concept of informational reinforcement as it includes aspects of image, self-expression, social class membership, social respect and appreciation. The results of her study, however, showed that social value only had an insignificant impact on consumer behaviour toward location-based mobile services (including m-advertising), suggesting the irrelevance of this construct to choice prediction. However, considering that the BPM's concept of informational reinforcement goes beyond social feedback to include *self*-feedback (Foxall, 1994a) as well as the evidence suggesting that status-driven consumption can appear in many other forms besides the prestige *per se* (e.g. consuming to impress others, consuming to express yourself, consuming to show affiliation to a certain group) (Gierl & Huettl, 2010), the evidence presented by Pura (2005) cannot serve as a sufficient proof that informational reinforcement is irrelevant for predicting m-advertising opt-ins. Therefore, this thesis seeks to further explore its potential influence on opt-in choices. However, keeping in mind that status benefits, in their pure form, have proven to be weakly related to m-advertising choices (Pura, 2005), in exploring the effects of informational rewards on opt-ins, this thesis focuses on image-related rather than prestige related informational factors.

In the light of the above evidence on the importance of informational reinforcements in consumer choice, it is logical to expect that the m-advertising opt-in choice can also be affected by informational rewards. To add to this, given that visibility is the main precondition for informationally-reinforced consumption (Amaldoss & Jain, 2005; Chao & Schor, 1998) and that mobile phones are clearly socially visible devices, the direct applicability of the concept of informational reinforcement on m-advertising choice appears even more likely. With this in mind, how should one interpret informational reinforcements in the m-advertising context?

First, given that m-advertising is an innovative product, this thesis would argue that feeling fashionable and projecting *the image of a fashionable person* is an important informational

reinforcement in the m-advertising context. That is, a consumer's opt-in choice may be influenced by the style or image related reward, which is commonly known as need for differentiation and self-expression (Belk, 1988; Berger & Heath, 2007; Kleine et al., 1993; Richins, 1994). This interpretation of informational reinforcement is consistent with the general profiles of first innovation adopters (Moore, 1999; Rogers, 1962, 1995).

Further, since m-advertising provides timely and relevant information to subscribers (e.g. a new store opening in the area, a new product line, a limited time promotion, a sample give-away), another informational reward that is likely to affect choice is acquiring *the image of a knowledgeable person*. In other words, always staying updated about the latest trends through m-advertising can boost one's self-image. Additionally, people with whom the recipient shares useful and timely information and who resultantly benefit from it are likely to form a positive opinion about that person and think of him/her as someone knowledgeable to consult and ask advice from when they need shopping information. Naturally, they will also be likely to express appreciation which will serve as an informational reward. In line with this argument, the proposed interpretation of informational benefits also matches the personality profiles of the earliest innovation adopters (Moore, 1999; Rogers, 1962, 1995).

Finally, the result of knowing a lot about different products and places is another informational benefit in the form of feeling and being thought of as *an* energetic, *socially active person.* In other words, a demonstration of an interest in fashion and other industry trends, as well as in products, can communicate to others that this person has an active lifestyle and always remains up to date with new places that open and new products that are available on the market. In addition, subscribing to m-advertisements from different brands and consequently receiving offers and invitations to participate in various events and promotions can also stimulate recipient's interest and lead to a more active lifestyle (e.g. receiving a news that a new coffee shop has opened in the area may pique one's interest and encourage him/her to invite a friend for a coffee; something that he/she would not otherwise have done on that day). This can result in the individual being more socially active and thus positively influences self-image. Thus, an active social life can be another interpretation of informational reinforcements in the m-advertising context. The argument that early innovation adoption is related to being socially active and energetic is associated with the characteristics of first innovation adopters (Moore, 1999; Rogers, 1962, 1995).

To summarise, in the m-advertising context, informational reinforcements should be interpreted as: (1) the image of a fashionable person, (2) the image of a knowledgeable consumer, and (3) the image of a socially active person. Just like utilitarian reinforcements

earlier, since the m-advertising is a relatively new service and opt-in for it normally occurs before trials, the reinforcing informational consequences are operationalised in this thesis in terms of rule-governance. Therefore opt-ins maintained by positive informational consequences are defined as image-*directed* behaviours.

2.3.3.3 Aversive Consequences

From the ability of products to produce utilitarian and informational rewards, follows the possibility of aversive consequences. According to the BPM, aversive consequences are punishments that discourage people from repeating a specified behaviour (Foxall, 1990, 1997a). Just like reinforcements, punishments can also be of two types: utilitarian (e.g. economic costs associated with a purchase, inconvenience caused by it, dissatisfaction with the product) and informational (e.g. social disapproval) (Foxall, 1990, 1997a), which will be separately discussed in this section.

First, there are utilitarian punishments which are well-documented in the literature (e.g. Baker, Parasuraman, Grewal, & Voss, 2002; Gupta & Kim, 2010; Yavas & Tuncalp, 1984). The intention to shop online, for example, is negatively influenced by utilitarian punishments that come with a product's price (Gupta & Kim, 2010). Similarly, intentions related to store patronage are negatively affected by costs in terms of finance, time and effort (Baker et al., 2002; Yavas & Tuncalp, 1984), as well as by negative affective reactions elicited by the store environment (Baker et al., 2002); all of which, in behaviourist terms, are utilitarian punishments.

Second, there are also informational punishments which can affect consumer behaviours in certain situations. Generally speaking, the logic behind the idea of informational punishments is that people want to be liked and therefore try to avoid behaviour that may create unfavourable impressions in others (Berger & Heath, 2007). A good example of the effect of informational punishment is the embarrassment that comes with purchase of highly personal products, such as condoms, in the presence of others (Dahl, Manchanda, & Argo, 2001). In such situations, people may adopt various behavioural strategies to alleviate embarrassment. For example, they may hide their purchase, wait for people to leave before buying and shop for these products in remote neighbourhoods (Dahl et al., 2001, p.480). Other examples of behaviours susceptible to the influence of informational punishments include buying products that demonstrate one's affiliation to unfavourable social groups. In some countries, for instance, buying a political opposition newspaper can be interpreted as belonging to the opposition and thus can result in negative social feedback. A purchase of book titled "Dancing for dummies" is also an illustrative example of a purchase that can signal membership of an undesirable group.

In innovation adoption literature, the idea of utilitarian punishments is reflected in two innovation attributes which are posited to influence adoption rates; namely, innovation complexity and trialability (Rogers, 1995; Rogers & Shoemaker, 1971). Complexity of innovation is defined as "the degree to which an innovation is perceived as relatively difficult to understand and use" and is negatively related to the rate of adoption (Rogers, 1995,p.257). In other words, people will avoid the risks from buying a new product, which might turn out to be difficult to use and thus cause problems. As for the trialability of innovation, it is defined as "the degree to which an innovation may be experimented with on a limited basis" and, just like innovation complexity, also reflects people's aversion to risk (Rogers, 1995). In other words, the higher the trialability, the lesser the potential risks of being unable to return an unwanted or poor quality product. For example, buying an expensive jewellery item in a foreign country on the day before going home can involve a low trialability and thus a high risk as consumers will not be able to return it without bearing financial risk if they change their minds later. Both theoretical constructs, complexity and trialability, have been found to be highly predictive of innovative behaviours in empirical studies (Holak & Lehmann, 1990; Ostlund, 1974; Tornatzky & Klein, 1982; Verhoef & Langerak, 2001).

Another theoretical construct in innovation adoption literature, that reflects the notion of informational punishment is the TAM's construct of "ease of use" (Davis, 1989; Davis et al., 1989; Venkatesh, 2000; Venkatesh & Bala, 2008; Venkatesh & Davis, 2000a; Venkatesh et al., 2003), which refers to the how easy it is to comprehend and use a new technological product (e.g. whether it is necessary to learn to use it, whether the interface is user-friendly). This concept is the direct opposite of innovation complexity construct from the innovation diffusion theory (Rogers, 1995; Rogers & Shoemaker, 1971) and thus also indicates the importance of utilitarian risk in innovation adoption. The ease of use factor has also frequently proven to be a reliable predictor of consumer choice in new product markets (Chtourou & Souiden, 2010; Hong & Tam, 2006; Li et al., 2008; Mallat et al., 2009; Porter & Donthu, 2006).

Besides the above discussed factors of innovation complexity (or ease of use) and innovation trialability, the literature on innovation adoption provides substantial evidence of the negative effects of other kinds of utilitarian punishments, such as risk (Bearden & Shimp, 1982; Black et al., 2001; Holak & Lehmann, 1990; Ostlund, 1974) and sacrifice (e.g. Kim, Chan, & Gupta, 2007), that are associated with innovative purchases, as well as the various risk barriers (e.g. incompatibility with traditions, value barrier, the barrier related to uncertainty about product benefits) (e.g. Antioco & Kleijnen, 2010; Kleijnen, Lee, & Wetzels, 2009; Kuester & Hess, 2009; Moreau, Lehmann, et al., 2001; Moreau, Markman, & Lehmann, 2001; Ram, 1989;

Ram & Sheth, 1989) that discourage new product buying. Clearly, all three risk concepts are in a direct relation with the concept of utilitarian punishments.

As for the informational punishment, innovation adoption literature also provides some evidence of such effects which are commonly referred to as social risks (Aldás-Manzano et al., 2009; Hirunyawipada & Paswan, 2006; Ram & Sheth, 1989). For example in electronics and online banking contexts, social risk refers to undesired attention and negative social response to the new service adoption (Aldás-Manzano et al., 2009; Hirunyawipada & Paswan, 2006). A more general interpretation of social risk is based on the idea of social ridicule caused by purchase and consumption of new product, which buyers naturally try to avoid (Ram & Sheth, 1989). Most importantly however, regardless of how it is defined, the social risk reflects the notion of informational punishments and has proven to negatively affect adoption behaviours (Aldás-Manzano et al., 2009).

Based on the above discussion regarding the importance of aversive consequences in consumer choice across a wide range of contexts, how should one interpret utilitarian and informational reinforcements in the m-advertising context? With regard to utilitarian punishments, this thesis would argue that since m-advertising does not involve direct communication with the sender, consumer behaviour towards it may be affected by *security and data privacy risks*. That is, when offered to subscribe, consumers may become afraid of financial fraud and possible misuse of their private data. Previous research on m-advertising opt-in choice (Bamba & Barnes, 2007; Bauer et al., 2005; Carroll et al., 2007; Merisavo et al., 2007; Okazaki et al., 2009; Peters et al., 2007) as well as studies into consumer adoption of online banking (Aldás-Manzano et al., 2009) and m-commerce (Khalifa & Ning Shen, 2008; Wu & Wang, 2005) strongly support this argument. The fact that consumers' opt-in choices are also influenced by the user's permission (Bamba & Barnes, 2007; Barwise & Strong, 2002; Carroll et al., 2007; Leek & Christodoulides, 2009; Rettie & Brum, 2001; Tsang et al., 2004) and user control of m-advertising process (Bamba & Barnes, 2007; Carroll et al., 2007; Leek & Christodoulides, 2009; Rettie & Brum, 2001) also demonstrates the relevance of security and privacy risks to the prediction of opt-in choices. In other words, to subscribe, consumers need to execute full control over who is sending them information (user permission, i.e. authorised advertisers only) as well as when how it is being sent (user control over m-advertising content and delivery).

Other utilitarian punishments would include medium-specific costs, such as receiving irrelevant information which holds no value and only serves to irritate users and clog their mobile phone's memory. Clearly, receiving m-advertising that a consumer has absolutely no

interest in is a negative consequence of an m-advertising opt-in and should thus be seen as a form of utilitarian punishment. In line with this proposition, previous studies present consistent evidence of strong negative effect of information irrelevance on m-advertising opt-in choice (Haghirian et al., 2005; Merisavo et al., 2007; Okazaki, 2004; Rettie & Brum, 2001; Tsang et al., 2004).

Finally, although the price cost is not an explicit component of m-advertising, as all m-advertisements are free, there may also be situations when other price-related factors would influence opt-in choice. To be more specific, m-advertising may be seen by consumers as just another way of luring them into using mobile functions that require payment. For example, for people who do not have internet add-on on their mobile contracts, use of an m-advertisement with an Internet link would incur additional charges from the service provider. Previous research into consumer adoption of m-commerce, m-service and m-advertising has shown that consumers are cautious of such possibilities and would normally avoid them (Anckar et al., 2003; Peters et al., 2007; Pura, 2005; Van der Heijden et al., 2005). Considering possible hidden costs in using some m-advertisements, it is logical to expect consumer opt-in choice to be affected, which adds yet another dimension to the interpretation of the utilitarian punishment concept in the m-advertising context.

With regards to informational punishments, although m-advertising literature does not address this possibility, given that the device is socially visible, there is a possibility of users being discouraged from opt-ins because of informational risks. This possibility is particularly high when m-advertising use is financially rewarded. Today, when using mobile phones is no longer extremely expensive, a person who subscribes to m-advertising just to benefit or save economically may be seen as *too money-conscious* (someone who wants to economise) or in some cases as someone *experiencing financial difficulties* (someone who needs to economise), both images opposed to would people would want to broadcast. Another possible interpretation of informational punishments comes from the fact that following trends and staying updated with market offerings through m-advertising certainly requires time, meaning that a person who is actively involved in such activities does not have other, more serious commitments. In other words, people may be put off from subscribing to m-advertising in fear of projecting an *image of a lack of productivity with an overabundance of time.*

To summarise, utilitarian punishments may include: (1) security and privacy risks, (2) irrelevant information, and (3) possible financial loss (i.e. charges). With regards to the informational risk, the proposed interpretation of this construct in the chosen context includes (1) the image of a money-conscious person, (2) the image of person experiencing financial

difficulties, and (3) the image of an unproductive person. In line with the earlier argument proposed in this thesis, aversive consequences, just like reinforcements, are operationalised in terms of rule-governance.

Based on the above discussion on opt-in behaviour consequences, it is proposed:

P3.1*: Positive consequences of opt-in choice will positively influence m-advertising opt-in choice.*

P3.2*: Negative consequences of opt-in choice will negatively influence m-advertising opt-in choice.*

2.3.4 Opt-in Choice

To summarise, according to the BPM (Foxall, 1990, 1997a), m-advertising opt-in choice is interpreted in this thesis as a function of consumers' learning histories and behaviour settings, which comprise physical, social, temporal and regulatory factors. Previous studies on m-advertising choice are in line with the BPM propositions, suggesting that the opt-in choice can be effectively reinterpreted through the BPM framework. The next section concentrates on the BPM's constructs of behaviour setting scope (situation) and the situation-specific emotional responses, and discusses how these concepts can contribute to the proposed behavioural account of the m-advertising opt-in choice.

3. The Role of Situational Factors in Opt-in Choice

3.1 Behaviour Setting Scope

As previously explained, the concept of situation is central to the behavioural analysis. The situation represents interaction between the individual and environment (e.g. Jane *in* a shopping mall). Academic scholars have long emphasised the importance of consumer situations in behaviour analysis (Barker, 1968; Belk, 1974, 1975b; Lutz & Kakkar, 1975; Mehrabian & Russell, 1974). As m-advertising literature has not yet presented a comprehensive account of situation and interaction between consumer-related and organisation-related opt-in choice determinants, this section explains the BPM concept of situation and discusses its effect on consumer choice in the m-advertising context.

In the BPM, the situation "depends not only upon the discriminative stimuli that make up the setting but also on the consumer's learning history which attaches meaning to them (i.e. distinguishes neutral from discriminative stimuli)" (Foxall, 1997b, p.195). Therefore, the key distinction regarding the BPM's interpretation of situation is that unlike previous conceptualisations of the situation (e.g. Barker, 1968; Belk, 1974), its notion of situation goes beyond behaviour setting and also includes individual factors represented by consumer's

learning history. For this reason, situation is positioned at the point of their intersection (**Figure 5**).

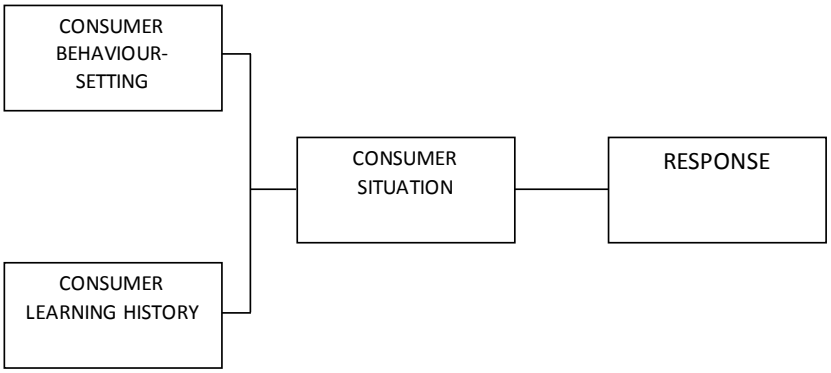


Figure 5: Consumer situation

Source: Foxall (1997b, p.100)

Prior to explaining the situation in further detail it is necessary to introduce the concept of the behaviour setting scope. The behaviour setting scope is defined as "the degree to which consumers are encouraged to conform to a pattern of behaviour set by someone else (e.g. on an airplane journey, a relatively closed setting) or are comparatively free to behave in a variety of ways (e.g. browsing for a gift in a luxury store, a relatively open setting)" (Foxall & Yani-de-Soriano, 2005, p.519). For example, a person who is staying at home on a Saturday morning is said to be in a perfectly open setting as there are many activities he/she is free to engage in (e.g. visiting a friend, going shopping, watching any program on TV). On the other hand, a person waiting in an airport departure hall is said to be in a closed setting as the choice of activities is extremely limited (i.e. he/she has to remain there and wait patiently) (c.f. Foxall, 1997b, pp.201-204).

The situation is represented by the interaction between the behaviour setting scope (closed and open) and the individual learning history (four operational classes of behaviour). As can be seen in **Figure 6**, operational classes of behaviour can be differentiated based on the degree of the behaviour setting's relative openness and closedness, which produces a total of eight situations or "contingency categories" (e.g. Foxall, 1992, 1994a, 1997a, 1997b; Foxall & Greenley, 1999, 2000). For example, "Accomplishment" behaviours when executed in an open setting (e.g. subscribing to m-advertising from a luxury store) are differentiated from behaviours of the same kind that occur in a closed setting (e.g. subscribing to m-advertising to get urgently needed information while on a luxury vacation abroad). In an open setting, such behaviours are said to occur in a "Status Consumption" situation and in a closed setting they occur in a "Fulfillment" situation. Similarly, "Maintenance" behaviours in an open setting

should be understood as "Routine consumption" situations (e.g. subscribing to m-advertisements from a local grocery store), whereas behaviours of the same class performed in a closed setting represent "Mandatory consumption" in the sense that there is very little, if any, possibility of avoiding it (e.g. use of mobile banking is conditional on subscription to m-advertising).

Consistent with the concept of the behaviour setting scope, evidence of such situational influences on consumer behaviour is well-documented in academic literature (e.g. Auty, 1992; Bearden & Woodside, 1976; Briersch, Chintagunta, & Fox, 2009; Chow, Ceisi, & Abel, 1990; Miller & Ginter, 1979; Park et al., 1989; Shukla, 2010; Vrechopoulos, O'Keefe, Doukidis, & Siomkos, 2004). For example, consumption of soft drinks (Bearden & Woodside, 1976), alcoholic beverages (Shukla, 2010) and choice of fast food restaurants (Miller & Ginter, 1979) are largely situation-dependent. Empirical evidence also shows that women choose different fragrance brands depending on the situation: they use the most prestigious brands for social occasions and the least prestigious brands for sporting activities (Chow et al., 1990). In some contexts, the situational context is especially important. For example, the occasion (i.e. the situation) has been reported as the most influential determinant of people's restaurant choices (Auty, 1992).

	Closed ←	→ Open
ACCOMPLISHMENT (high utilitarian, high informational)	**Contingency Category 2** FULFILMENT	**Contingency Category 1** STATUS CONSUMPTION
HEDONISM (PLEASURE) (high utilitarian, low informational)	**Contingency Category 4** INESCAPABLE ENTERTAINMENT/ PLEASURE	**Contingency Category 3** POPULAR ENTERTAINMENT
ACCUMULATION (low utilitarian, high informational)	**Contingency Category 6** TOKEN-BASED CONSUMPTION	**Contingency Category 5** SAVING AND COLLECTION
MAINTENANCE (low utilitarian, low informational)	**Contingency Category 8** MANDATORY CONSUMPTION	**Contingency Category 7** ROUTINE PURCHASING

Figure 6: BPM Contingency matrix

Source: adapted from Foxall & Greenley (2000, p.44)

In the innovation diffusion literature, however, there is a lack of research regarding situational influences on adoption choice. The theory only went as far as to posit that adoption choice may be influenced by whether a choice is optional, collective or compulsory (Rogers, 1995; Rogers & Shoemaker, 1971). The possibility of interaction between internal and external factors has not yet been sufficiently investigated. Burns (2007, p.462) comments on the lack of studies investigating situational influences on innovation adoption choice:

"*…Instead of developing and/or testing a causal model based on […] situational factors, past research has typically investigated isolated relationships involving primarily personal variables, often to determine whether a correlational relationship exists between innovative behavior and the latest psychological measuring instrument"*

Along the same lines, Steenkamp and Gielens (2003, p.368) also emphasise the importance of incorporating both organisation- and consumer-related drivers of innovation adoption, and accounting for their simultaneous and interactive effects. Their finding was that the effects of consumer variables, including dispositional innovativeness, on an actual trial of new products were largely influenced by contextual market factors. In further support of the importance of situational factors, innovation adoption literature also provides evidence that the consumption situation can often be the *main* determining factor in new product choice (Lai, 1991).

In line with the foregoing discussion, the importance of studying situational influences on m-advertising opt-in choice has been recently emphasised by Okazaki and Barwise (2011). They report that one of the most striking features of the literature review is that although ubiquity is frequently mentioned as the main and the biggest advantage of mobile phone, very few studies have investigated how precisely organisations can make use of this characteristics. Specifically, they ask, if ubiquity is to be interpreted as flexibility of time and space, what would be the implications of the location-specific and time–sensitive (i.e. situation-specific) m-advertising for retailers and how would these features affect consumer choice? They therefore call for studies that focus on utilising the ubiquity of mobile phones and adjusting m-advertising practices to situational context (Okazaki & Barwise, 2011).

In this view, incorporating a situational element into the behavioural account of the opt-in choice is fully justifiable from both the general consumer choice and the innovation diffusion perspective. An important remark, however, is that the effect of setting scope on approach behaviours tends to vary depending on how specifically the setting scope is operationalised. For example, large in-store assortment size (i.e. open setting in terms of number of options) was found to positively influence probability of consumers selecting that store (Briersch et al.,

2009), meaning that openness in terms of variety of choice is positively related to approach behaviours. However, where the openness is operationalised differently, the results may be the opposite. In particular, previous research has shown that in store settings where it is difficult to find products ("racetrack" shopping mall layout), consumers tend to spend more time browsing than in stores with simple "grid" patterns (i.e. aisles) and "freeform" (open space) layouts (Vrechopoulos et al., 2004), suggesting that it is a closed rather than an open setting that encourages consumers' approach behaviours.

The above difference in the effect of behaviour setting scope raises the question of what effect this would have on consumer m-advertising choices. In answering this question it is important to account for the fact that whilst in ordinary consumption contexts (e.g. ordering food at a restaurant, shopping for clothing), approach behaviours are related with direct and familiar benefits, approach behaviours in m-advertising contexts are not. Instead, since the service is new, the benefits of m-advertising subscription are mostly unknown to potential subscribers and are not direct in the sense that m-advertisements only function as means of receiving certain benefits (e.g. a voucher coupon received through an m-advertisement needs to be used in store). Therefore, whereas many types of consumption may not need to be heavily stimulated as they occur naturally (i.e. constant demand for necessities such as food and medicine), m-advertising is usually unwelcome, and at best reluctantly accepted (Grant & O'Donohoe, 2007; Kolsaker & Drakatos, 2009). In this view, it is logical to expect that in the m-advertising context, approach behaviours will be most likely to occur in situations where consumers have very few alternative choice options (i.e. closed settings) rather than where they can fulfil their situation needs by other means.

This is not to say however that the suggested practice is to put pressure on consumers. The argument is instead on merely limiting the choice options available to naturally lead consumers to opt-in. This can be achieved through offering exclusive benefits through m-advertising (e.g. special discounts not available for nonsubscribers, exclusive invitations to "closed" events) and offering this service in locations with limited information and entertainment options where consumers may be in need of instant information (railway stations, airports, foreign countries). As evident from these examples, a closed setting should not be seen as pressure, but is rather mostly concerned with finding or creating the right place and time (i.e. situation) to offer the service.

Based on the above discussion, it is proposed:

P4: *Situations where the behaviour setting scope is closed will be more effective in stimulating consumers' opt-in for m-advertising than situations where the behaviour setting scope is open.*

3.2 Situation-Specific Emotions

Essential to the understanding of situational influences on choice is knowledge about situation-specific emotional responses which have consistently proven to be related to all three basic components of situation-specific behaviours; behaviour setting scope and utilitarian and informational consequences (refer to the contingency matrix in **Figure 6**) (c.f. Foxall, 1997b, 1997c; Foxall & Greenley, 1998, 1999, 2000; Soriano, Foxall, & Pearson, 2002; Yani-de-Soriano & Foxall, 2002). In particular, previous BPM studies have found that utilitarian behaviour consequences, informational behaviour consequences and behaviour setting scope are co-related with consumer emotions of Pleasure, Arousal and Dominance, respectively, which are the three defining components of the Mehrabian and Russell (1974) environmental psychology model (PAD) (c.f. Foxall, 1997b, 1997c; Foxall & Greenley, 1998, 1999, 2000; Soriano et al., 2002; Yani-de-Soriano & Foxall, 2002).

In addition to the fact that consumer emotions are directly relevant to the situational concept, there is also strong evidence suggesting that emotions play an important role in m-advertising adoption. In particular, the influence of emotions on human behaviour is widely acknowledged in consumer behaviour literature (Andrade & Cohen, 2007; Babin & Darden, 1996; Beatty & Ferrell, 1998; Cryder, Lerner, Gross, & Dahl, 2008; Gao, Wheeler, & Shiv, 2009; Griskevicius et al., 2009; Lerner et al., 2004; Sivanathan & Pettit, 2010). For example, in a consumption context, positive mood encourages spending (Babin & Darden, 1996) and impulse buying (Beatty & Ferrell, 1998). The same effect has been observed for the negative feelings. For example, negative emotion of sadness is known to increase in-store spending (Lerner et al., 2004) and negative feelings associated with a damaged self-image increase consumers' tendencies to engage in compensatory consumption of status goods (Sivanathan & Pettit, 2010) and purchase self-view-bolstering products (Gao et al., 2009).

Similarly, past research has demonstrated that consumer behavioural reactions towards advertising are inherently associated with emotional reactions (Griskevicius et al., 2009; Pham, 2004) and emotions have also proven important behaviour predictors in the advertising context (Griskevicius et al., 2009; Rucker & Galinsky, 2009). For example, emotions of fear (Griskevicius et al., 2009) and powerlessness (Rucker & Galinsky, 2009) increase viewers' susceptibilities to social proof advertising appeal, thereby increasing persuasiveness of the advertising messages.

In line with this, literature on consumer behaviour towards innovations also strongly suggests that adoption of innovations is greatly influenced by emotional factors (Bartels & Reinders, 2010; Castano et al., 2008; Wood & Moreau, 2006). For example, Castano et al. (2008) found that emotional attachment to old products is one of the constraints that prevent adoption of innovations, and that as time to adoption nears, consumers tend to develop anxiety and have lowered levels of optimism. Wood and Moreau (2006) also found those consumers' positive and negative emotions, as caused by disconfirmation of use complexity expectations, have a strong effect on evaluations in all time periods, although these tend to diminish over time. In line with this argument, the role of emotions in innovation adoptions is also emphasised in conceptual works (Bartels & Reinders, 2010).

Given the above evidence, it is logical to expect consumer emotions to be closely associated with their opt-in choices. However, rather than considering the emotional aspect of opt-in choice in isolation, this thesis frames the analysis into specific situations commonly associated with respective emotional responses (c.f. Foxall, 1997b, 1997c; Foxall & Greenley, 1998, 1999, 2000; Soriano et al., 2002; Yani-de-Soriano & Foxall, 2002). Thus, following previous BPM studies, which identified associations between consumer emotions and the eight situations (e.g. Foxall, 1997b), this research utilises Mehrabian and Russell's (1974) environmental psychology model (PAD) to investigate associations between opt-ins and consumers' affective responses to situations. Importantly, the PAD model is a widely recognised psychological instrument, which has consistently received strong empirical support in other marketing literature (e.g. Baker, Levy, & Grewal, 1992; Donovan & Rossiter, 1982; Donovan, Rossiter, Marcoolyn, & Nesdale, 1994; Lee et al., 2005; Li, Kim, & Lee, 2009; Menon & Kahn, 2002; Mummalaneni, 2005; Ryu & Jang, 2008; Tai & Fung, 1997).

The investigation of the role of situation-specific emotions in opt-ins starts with testing the relatedness of the PAD elements to the BPM's constructs of reinforcement and setting scope. Thus, the first step is to determine whether the earlier identified associations between PAD elements and BPM elements (e.g. Foxall, 1997b) would hold in the m-advertising context.

P5.1*: Pleasure will discriminate between Accomplishment-Accumulation and Pleasure-Maintenance.*

P5.2: *Arousal will discriminate between Accomplishment-Pleasure and Accumulation-Maintenance.*

P5.3: *Dominance will discriminate between Open and Closed consumer behaviour settings.*

Further, previous research also indicates that although behaviours may differ across cultures consumer affective reactions are universal (Yani-de-Soriano & Foxall, 2002). The next step in investigating the role of emotions in opt-ins is therefore to test whether this argument on the universality of emotions would hold true in the m-advertising context.

> **P6:** *Cultural background of consumers will not significantly affect their Pleasure, Arousal and Dominance affective responses to m-advertising.*

Finally, with regard to the relationship between emotions and opt-in, an important remark needs to be made. Whereas radical behaviourism is based upon the S-R-S contingency, which does *not* explicitly include the organism (O), the PAD model (Mehrabian & Russell, 1974) is based on an S-*O*-R paradigm, where environmental stimuli (S) prompt an organism's emotional responses (O), which in turn determine approach/avoidance behaviour (R). In other words, in contrast to radical behaviourism, in the PAD model, emotions are seen not only as responses but also as the *causes* of behaviour and, for that reason, are pictured between environment and behaviour as a *mediating* element (**Figure 7**).

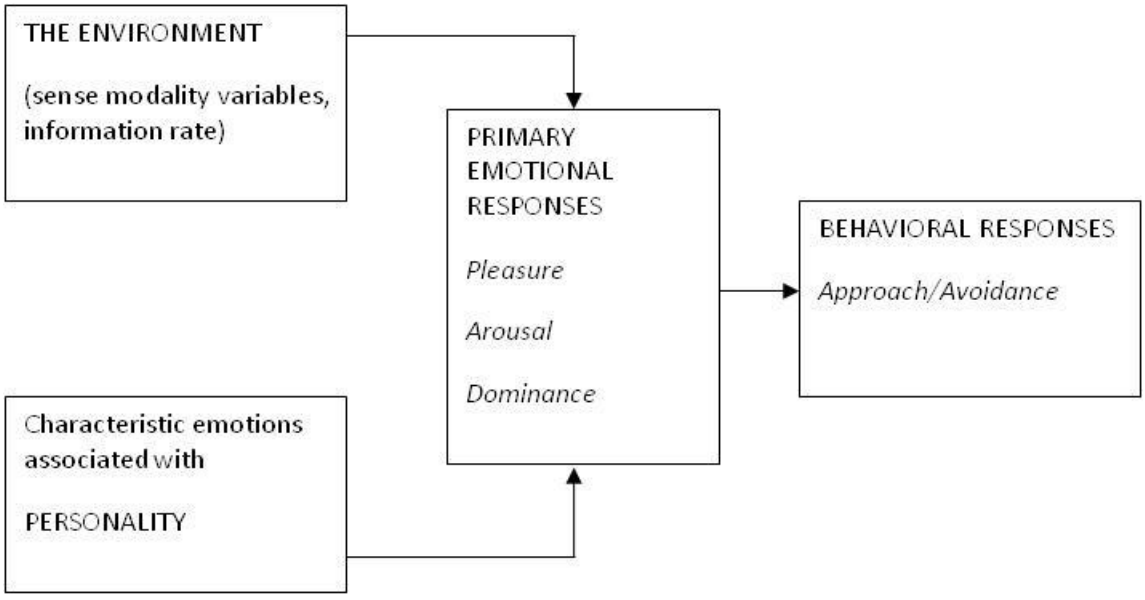


Figure 7: The role of primary emotional responses in behaviour

Source: Adopted from Mehrabian and Russel (1974, p.8)

Although this position contradicts the principles of radical behaviourism, it is important to remember that Skinnerian behaviourism does not dictate *exclusion* of affective variables from the analysis. Skinner has defined emotions as *predispositions* to act in certain ways (Skinner, 1953, p.162), which although do not *have* to increase the probability of a response; nevertheless have "a kind of second-order probability- the probability that a given

circumstance will raise the probability of a given response" (p.169). He also states that emotions may be useful for classifying "behaviour with respect to various circumstances which affect its probability" (Skinner, 1953, pp.162-163). Following this logic, this thesis argues for the inclusion of affective responses in the analysis as general factors reflecting opt-in predisposition in behaviourist terms.

In this regard, it is also important to remember that despite having its roots in radical behaviourism, the BPM framework is *adaptive* and *integrative*. Previous BPM studies have explored the possibility of relating emotional responses to behavioural responses by applying Staats's behaviourism (1996), which posits that emotions can function as *both* the antecedent stimuli and behavioural responses. Importantly, in these studies, Staats's (1996) behaviourism has consequently proven relevant to the behavioural explanations of choice (Foxall, 2002b; Foxall & Greenley, 2000; Foxall & Yani-de-Soriano, 2005), clearly indicating that emotions *do* act as behaviour antecedents. Following previous applications of Staats's (1996) behaviourism in the BPM research, this thesis additionally explores the possibility of affective responses functioning as direct opt-in stimuli:

> **P7:** *Affective responses to situations will significantly affect m-advertising opt-in choice.*

4. The Role of Consumer Innovativeness in the M-advertising Opt-in Choice

As will be recalled, this thesis has proposed inclusion of the innovativeness factor into the BPM for analysis of consumer choices in new service contexts. Therefore, this section discusses how precisely this innovative behaviour is to be interpreted and predicted from a behavioural perspective and, more specifically, how the underlying concept of consumer innovativeness contributes to the proposed behaviourist account of the opt-in choice.

4.1 Behaviourist Interpretation of Innovation Diffusion

The need for a better understanding of behavioural differences across adopter groups, and adjusting marketing communication to the changing needs of consumers at different diffusion stages, has been long emphasised in the academic literature (Gatignon & Robertson, 1985, proposition 20; Moore, 1999; Shankar et al., 2010, p.116). For example, according to Moore (1999), the likelihood of an innovation failing is highest in *between* the adopter groups, with the largest divide being between innovators and early adopters. He argues that product uptake by one group of consumers does not in any way guarantee its continuous adoption by other consumer groups. In fact, he explains, if an innovation is presented to a new consumer group in the same way it was presented to the preceding group, it is likely that it will fail at this

stage. Hence, in order to cross these "chasms", companies need to develop customised approaches for each adopter group (Moore, 1999). Given this need, a question arises as to what factors would be most effective for each of the four groups, and how one can best tailor the offerings to satisfy the requirements of each adopter segment.

In addressing this question, Foxall (1993, 1994a, 2007a) proposes a behavioural interpretation of the innovation adoption, where the adoption choices of each group are explained by the BPM's notion of operational classes of behaviour (i.e. Accomplishment, Pleasure, Accumulation, Maintenance) **(Figure 8).**

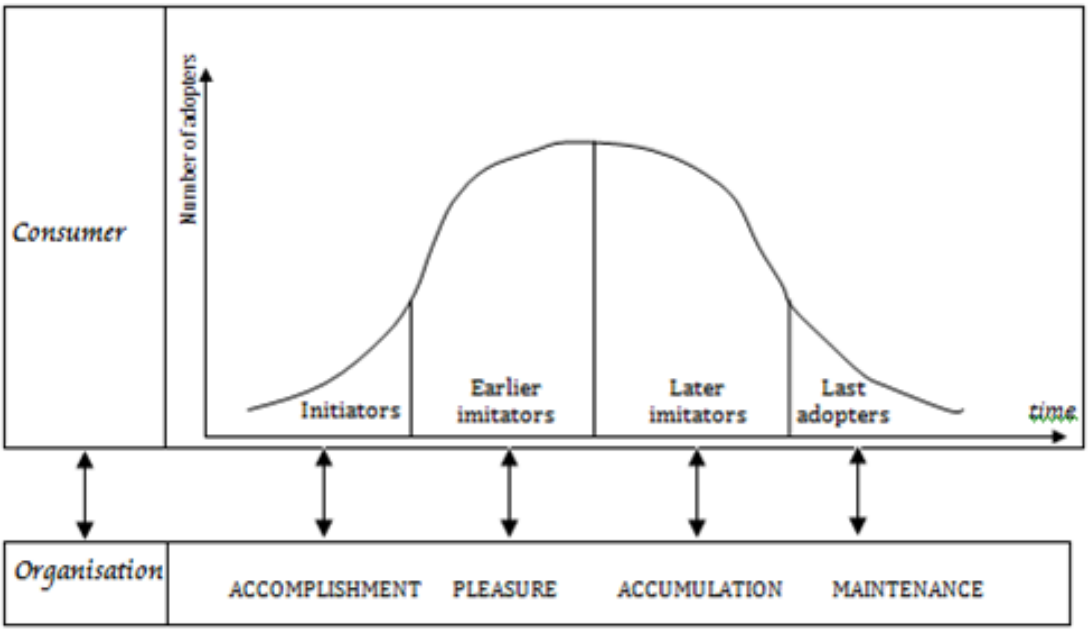


Figure 8 : BPM definitions of adopter categories

Source: Adapted from Foxall (1993b, p.50)

According to Foxall (1993, 1994a, 2007a), behaviour of market initiators is reinforced by high utilitarian (i.e. buying a new functionality or better performance) and high informational reinforcements (e.g. being first to buy a product). Early imitators, however, do not seek to the social recognition and status that encourage the market initiators and prefer purely utilitarian benefits associated with the new product's functionality. Therefore, the behaviours of market initiators are best explained by the "Accomplishment" operant class (high utilitarian and high informational reinforcement) and the behaviours of early imitators are explained by the "Pleasure" operant class (high utilitarian and relatively low informational reinforcement). He further explains that after a certain time, people become *negatively* reinforced. Therefore, unlike initiators and early imitators before, late imitators are primarily negatively reinforced by avoidance of low social status associated with *not* buying the innovation. Hence, their behaviours are largely affected by negative informational reinforcement and can thus be

ascribed to "Accumulation" type. Similarly, last adopters are mainly motivated by avoidance of both social disapproval (e.g. social ridicule, high social pressure) and the economic disadvantages associated with *not* adopting the product (Foxall, 1993). The behaviours of last adopters thus associate them with belonging to the "Maintenance" class.

The above conceptualisation also implies that at each innovation diffusion stage, adoption is determined by the individual's learning history of innovative behaviours (Foxall, 1993; Goldsmith & Foxall, 2003). Thus, initiators adopt early because they had previously been rewarded for being innovative by both utilitarian and informational reinforcements. Similarly, last adopters are the last to adopt because their innovative behaviours have not been rewarded by either type of benefits in the past. Clear connections are drawn between types of adopters, their past experiences with the product and the benefits to which they would be most susceptible.

The underlying logic of Foxall's (1993, 1994a, 2007a) argument is transferrable to consumer m-advertising opt-in choice. It can be argued that the initiators would experience high utilitarian benefits of receiving useful information about the products they are interested in as well as some kind of informational reinforcement in a form of social approval. Subscribing to receive exclusive offers and customised updates from a luxury store would generate both the practical benefit of getting to know about newly available products from the range one usually buys as well as serve to boost self-esteem via positive social feedback. Therefore, such behaviours would be classified as "Accomplishments".

After a certain time, however, as more people opt-in for m-advertising, the exclusivity benefit gradually fades out and the main reason for subscribing to the service becomes one of a purely functional benefit. For example, people may be attracted by opt-in incentives, such as discount coupon and free call time. In line with Foxall's argument, such opt-ins would represent the "Pleasure" type.

Later, after the majority of consumers have started using m-advertising, opting-in for it may potentially become a social norm. At this stage, individuals may find themselves using m-advertising in order to comply with these norms and so avoid negative feedback. Although today such a scenario may sound unrealistic, this is highly probable when one looks at m-advertising in the context of the other services to which is it often affiliated. For example, if a dominant majority of the population starts actively using m-advertising from favourite brands and receiving free call time in return, it may become somewhat ridiculous to continue paying connection fees. Also, high penetration of the service may result in other practices being

widely adopted, as was the case with the Internet. For instance, some retailers often offer better prices on their websites than at the point of sale (e.g. train companies) and people are often better off buying products online rather than buying them at the point of sale. When this point is reached, the opt-in behaviours would fall into the "Accumulation" category.

At the last stage of diffusion, when the use of m-advertising becomes common, one should expect a consequent rise of m-commerce, which may in turn bring some economic disadvantages of *not* using m-advertising at the late diffusion stage, as occurred with the Internet previously. As a result, the use of m-advertising is likely to become a common practice, as was the case with previous successful innovations. Thus, opt-ins due to associated status and economic disadvantages of *not* using the service will represent the "Maintenance" behaviour.

Importantly, Foxall's proposition has not yet been empirically tested and thus calls for special consideration. In the light of the preceding discussion on the applicability of this logic to the m-advertising context, it is therefore proposed:

> **P8.1:** *"Accomplishment" pattern of reinforcement will be most effective in stimulating opt-in choice among market initiators.*
>
> **P8.2:** *"Pleasure" pattern of reinforcement will be most effective in stimulating opt-in choice among early imitators.*
>
> **P8.3:** *"Accumulation" pattern of reinforcement will be most effective in stimulating opt-in choice among late imitators.*
>
> **P8.4:** *"Maintenance" pattern of reinforcement will be most effective in stimulating opt-in choice among last adopters.*

Further, since consumer's behavioural responses to different reinforcement patterns are expected to vary across the adopter groups, it is logical to expect that their affective reactions to situations will also vary. For example, market initiators who have a defined tendency to behave innovatively (c.f. Goldsmith & Hofacker, 1991) may be more pleased by (i.e. Pleasure) and more excited about (i.e. Arousal) subscribing to the m-advertising than their less innovative counterparts. In support of this argument, academic literature provides evidence that compared to laggards, innovators have higher perceptions of innovation benefits and lower perceptions of innovation risks (Ostlund, 1974).

Further, drawing from the argument that highly innovative consumers are more independent in their choice making (Midgley, 1977) and are less influenced by other people's expertise (Lafferty et al., 2005) than less innovative consumers, it can be expected that high levels of innovativeness will make people more perceptive to the limitation of freedom (i.e. Dominance) associated with the behaviour setting closure. Therefore, it is further proposed:

P8.5: *Affective reactions to situations will vary across adopter groups.*

4.2 The Concept of Innovativeness

Given the above stated propositions, an important issue revolves around how best to categorise consumers into the four groups? More specifically, how should consumer innovativeness be operationalised to enable an effective test of these propositions? To address this, this section focuses specifically on this issue.

Generally, there are three possible levels of abstraction: (1) global/innate, (2) product category/domain-specific, and (3) product-specific/actualised (Goldsmith & Foxall, 2003; Mudd, 1990; Roehrich, 2004). At the lowest level of abstraction, there is *actualised* innovativeness, which is the actual displayed innovative *behaviour* itself, or, as Rogers (1962) defines it, the "relative earliness" of actual adoption (i.e. time since the introduction until adoption). Importantly, Foxall's model of innovation diffusion is also based on the concept of actualised innovativeness (Goldsmith & Foxall, 2003, p.324). Despite its undoubted advantages, this operationalisation of innovativeness has been criticised for bearing "no isomorphic relationship with the latent construct it is supposed to operationalise" (Goldsmith & Hofacker, 1991, p.209; Midgley & Dowling, 1978). At this level of abstraction, as noted by Goldsmith and Hofacker (1991, p.209), the innovativeness construct is of very little use since adoptions can only be analysed retrospectively and no predictions about future innovative behaviours are possible.

At the highest level of abstraction, *global* innovativeness is at the opposite extreme of the actualised innovativeness. Global innovativeness has received a number of interpretations in research literature. For example, some scholars see innate innovativeness as a general personality trait (Dowling, 1999; Hurt, Joseph, & Cook, 1977; Midgley, 1977; Robertson & Kennedy, 1968), while others define it as a general predisposition to buy new products (Gielens & Steenkamp, 2007; Steenkamp & Gielens, 2003; Steenkamp et al., 1999). Another group of researchers adopts a slightly different interpretation: according to them, innovativeness is a trait-like cognitive style or a problem-solving approach (Foxall, 1994b,

1995a; Foxall & Bhate, 1993a, 1993b; Foxall & Haskins, 1986; Kirton, 1989; Venkatraman, 1991). Some have also adopted the view that innovativeness has emotional aspects, such as, for example, "inherent novelty seeking" (Hirschman, 1980; Manning, Bearden, & Madden, 1995), "need for change" (Cotte & Wood, 2004; Wood & Swait, 2002), 'variety seeking" (Menon & Kahn, 1995) and "need for cognitive and sensory stimulation" (Hirunyawipada & Paswan, 2006; Venkatraman & Price, 1990). Most recently, Vandesteele and Geuens (2010) put forward a proposition that innovativeness should be considered a motivational construct and measured across functional, hedonic, social and cognitive dimensions. The problem with this level of operationalisation, however, is that, innate innovativeness is often very weakly correlated with innovative behaviours (Bartels & Reinders, 2010; Bowden & Corkindale, 2005; Citrin et al., 2000; Foxall, 1994b, 1995a; Foxall & Bhate, 1993a, 1993b; Foxall & Haskins, 1986; Goldsmith, Freiden, & Eastman, 1995; Goldsmith & Hofacker, 1991; Im, Bayus, & Mason, 2003; Im, Mason, & Houston, 2007; van Rijnsoever & Donders, 2009), which devaluates its usefulness for choice prediction. Given this evidence, it can be argued that the weak relationship between innovativeness and m-advertising opt-ins reported in previous studies (Bauer et al., 2005; Mort & Drennan, 2007) could have been caused by the fact that previous studies operationalised innovativeness at this most general level.

Due to impossibility of using the actualised and innate types of innovativeness for making predictions, it has been proposed to analyse innovativeness at a medium "domain-specific" level or innovativeness specific to the given product category (Goldsmith, d'Hauteville, & Flynn, 1998; Goldsmith et al., 1995; Goldsmith & Hofacker, 1991). Domain-specific innovativeness mediates between the global construct and the actualised innovativeness – i.e. it enables predicting future adoptions of new products based on the aggregate measure of actual past innovative behaviours in the product domain of interest. The domain-specific innovativeness (DSI) scale has proved a reliable predictor of innovative behaviours in a number of empirical tests (Aldás-Manzano et al., 2009; Bartels & Reinders, 2010; Blake et al., 2005; Citrin et al., 2000; Flynn & Goldsmith, 1993; Goldsmith, 2001; Goldsmith et al., 1998; Goldsmith & Flynn, 1992; Goldsmith et al., 1995; Hirunyawipada & Paswan, 2006) and is today considered the best predictor of innovative behaviours (Roehrich, 2004).

4.3 Operationalising Innovativeness

Thus far the discussion was focused on the various conceptualisations of innovativeness and the behavioural interpretation of innovation diffusion. It has also been noted that Foxall's (1993, 1994a, 2007a) behavioural interpretation of diffusion operationalised innovativeness is effective at the *lowest* level of abstraction – i.e. the innovative behaviour itself that has *already* occurred (Goldsmith & Foxall, 2003, p.324). Referring back to Goldsmith and

Hofacker (1991, p.209) who stated that actualised innovativeness bears "no isomorphic relationship with the latent construct it is supposed to operationalise" and thus only allows analysing adoptions *retrospectively*, it is logical to argue that despite its undoubted contributions the behavioural model of diffusion (Foxall, 1993, 1994a, 2007a) could benefit from an alternative less specific operationalisation of individual innovativeness. This is because in new product markets, where the behaviour of interest is *first* trial (meaning that it has not previously occurred), using the concept of actualised innovativeness, which is by definition the very same behaviour, would essentially mean attempting to predict it by itself *before* it occurred. In other words, in a new service context, operationalising innovativeness as actualised would result in the meaning of the term "innovativeness" being lost.

Therefore, following Foxall's (2007c, p.16) recommendation regarding keeping an open mind towards the inclusion of new elements in the behavioural prediction model, this thesis proposes using the domain-specific innovativeness (Goldsmith & Hofacker, 1991) instead of actualised innovativeness. This proposition should not be viewed as contradicting the principles of behaviourism, since innovativeness at the domain-specific level is a behavioural tendency or pattern, which is characteristic to the product category of interest (Goldsmith & Hofacker, 1991). In other words, instead of attempting to predict adoption behaviour using that very *same* behaviour as its own predictor (actualised innovativeness), operationalising consumer innovativeness as a tendency to behave innovatively within the given product category (domain-specific innovativeness) allows prediction of future adoptions from current similar behaviours in the product domain.

4.4 Innovativeness as a Moderator Variable

Given the possibility of innovativeness being included in the BPM, it needs to be made clear as to where in the BPM it would best be suited. In answering this question, following the logic of the behavioural account of diffusion (Foxall, 1993, 1994a, 2007a), one can assume that innovativeness represents a part of learning history relevant to past instances of innovative behaviours. This thesis would challenge this logic and argue that this is not the case, however.

First of all, the nature of innovativeness is different from the nature of learning history, as operationalised in this thesis[4]. While consumer's learning history is primarily concerned with the *composition* of previous experiences (i.e. whether individual history in relation to the

[4] Learning history is this thesis is interpreted as past experiences with its other theoretical components of evolutionary past and attitudes not directly addressed (refer to section 2.3.2 on learning history interpretation).

product category of interest has been majorly rewarding or punishing), innovativeness is a measure of behaviour *intensity* (i.e. to what *extent* an individual is predisposed towards innovative consumption within the product category in question). According to this view, it is logical to state that in an innovation adoption context, the effects of consumer's learning history and the effects of consumer's level of innovativeness on choice need to be separated out; the former specifying the valence or the direction of influence of past experiences on behaviour, and the latter amplifying or reducing this influence.

Imagine two consumers, for instance, who have both had relatively good experiences with their m-applications in general. Consumer A subscribes to m-advertising that helps her/him in everyday life, such as for instance, regular best offers from a local grocery. Consumer B is a mobile application enthusiast; he/she likes new models and enjoys searching for new exciting m-applications. Although a positive past experience would equally predispose both consumers to subscribing to a new form of m-advertising, such as for example, in-application augmented reality m-advertising offered by Ikea, it logical to expect subscription by Consumer B will be relatively more probable, than that by Consumer A. In other words, innovativeness would function as a *moderating* variable which either reduces or increases the primacy of the effect of past experiences on subscription.

Also, as will be recalled, Foxall's (1993, 1994a, 2007a) behavioural model of diffusion posits that the effects of learning history would vary across adopter groups (**P.8.1-P8.4**) (Goldsmith & Foxall, 2003). Simply put, what stimulates first adopters would have no effect on last adopters and vice versa. Keeping in mind that adopters are classified based on the level of innovativeness, this proposition can be articulated as moderation of the effectiveness of learning history by the level of innovativeness. Based on the above discussion, it is proposed:

P9.1: *Innovativeness will moderate the influence of learning history on the opt-in choice.*

Further, in addition to the argument that the effect of learning histories would vary across the segments, Foxall (1993, p.50) also put forward a proposition that different groups of consumers would differ in "susceptibility to the motivating effects of behaviour setting element which encourage earlier adoption". Stated differently, different levels of innovativeness would result in the setting influences being more or less pronounced, which again suggests the moderating function of innovativeness.

To elaborate, at the first stage of diffusion, for instance, when the m-advertising service is an innovation people will be likely to be attracted mostly by the service's physical characteristics

such as entertaining content, interesting information and new exciting format. Therefore, it is logical to expect market initiators to be most effectively stimulated by the *physical setting.*

After a certain time, when m-advertising starts to spread from the small circle of true innovators to the wider community, of highest importance may become social factors, such as recommendations shared through personal networks and the growing popularity of the service. In other words, earlier initiators who opt-in for m-advertising at this stage will be likely to be influenced mostly by the *social setting.*

Then, as the service becomes commonplace, physical features will lose their initial appeal and social effects will have already expired, people will become concerned about the negative informational consequences associated with *not* using m-advertising (Foxall, 1993, 1994a, 2007a). Therefore, *temporal factors* (subscribing early enough to avoid negative social feedback of being unfashionable for instance) may prove most important.

Similarly, at the final stage, subscription to m-advertising is likely to become a very ordinary practice and thus will no longer be attractive unless it is absolutely necessary. Therefore, consumers will only subscribe to it when it is necessary or they are required to do so. Stated differently, last adopters will be likely to be most susceptible to the *regulatory setting*. Hence, it is proposed:

> **P9.2**: *Innovativeness will moderate the influence of behaviour setting on opt-in choice.*

5. Towards a Behavioural Interpretation of Opt-in Choice

This chapter has sought to develop a behavioural account of m-advertising opt-in choice, applying the BPM (Foxall, 1990, 1997a). It has explained the BPM and specified the ways of applying its principal components in the chosen context. Additionally, it has expanded on the model by proposing incorporation of the innovativeness factor for choice prediction in the new service context. The proposed explanatory account of the m-advertising opt-in choice can be summated into an analytical framework (**Figure 9).**

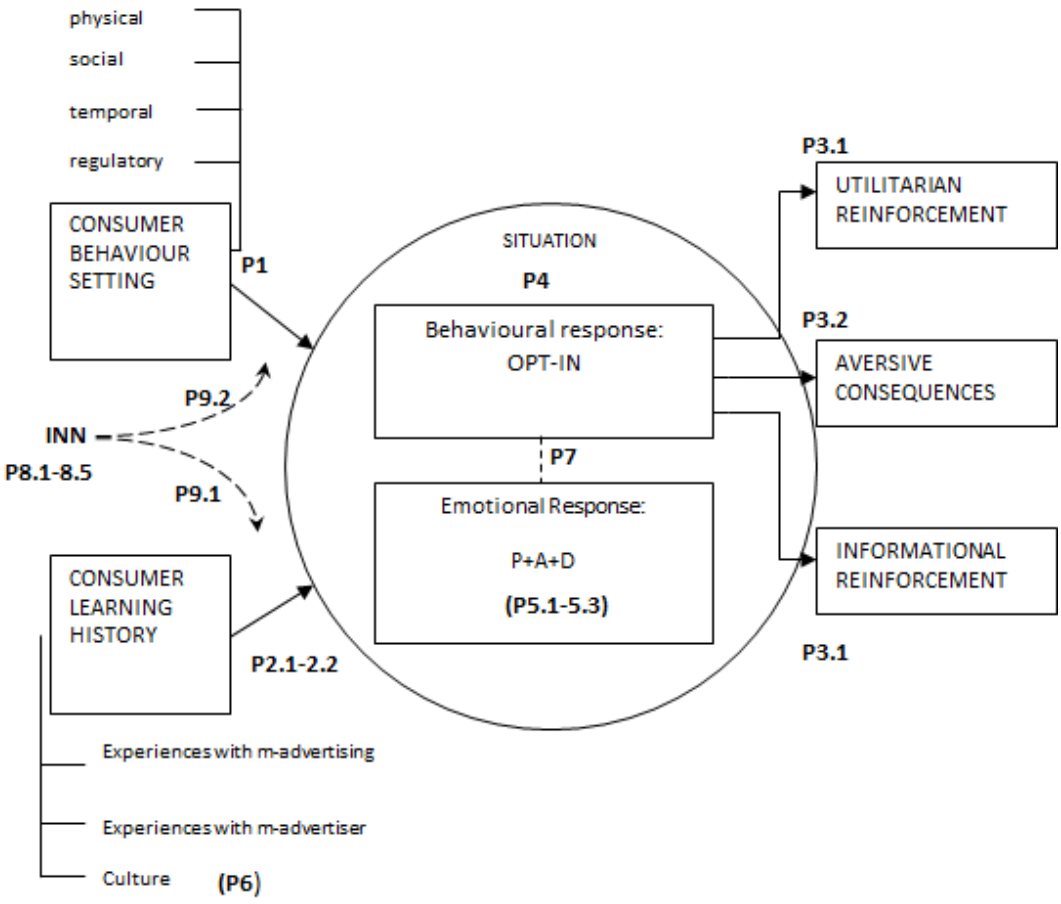


Figure 9 *Conceptual model of m-advertising opt-in choice*

Source: adapted from Foxall (2007)

To summarise, the proposed analytical model is based on BPM (Foxall, 2007a). Consistent with the BPM (Foxall, 1990, 1997a), m-advertising opt-in choice is influenced by antecedent stimuli represented by the setting and learning history and the opt-in consequences of utilitarian and informational nature. The situation, which is a meeting place of consumer behaviour setting and consumer learning history, is shown to encircle consumer responses in **Figure 9,** thereby representing the influence of situations (Foxall, 1990, 1997a, 2007a). In agreement with the BPM, the behaviour setting is represented by physical, social, temporal and regulatory settings. As far as learning history is concerned, the adapted interpretation of this concept only includes relevant past experiences and a concept of culture in which one accumulates these experiences. Consumers' opt-in responses are shown to co-occur and co-vary with emotional responses (Skinner, 1953). In addition, following Staats's (1996) behaviourism, this thesis also explores the possibility of affective responses functioning as antecedent stimuli; a proposition that has proven correct in previous BPM studies (c.f. Foxall, 2002b; Foxall & Greenley, 2000; Foxall & Yani-de-Soriano, 2005) (**Figure 9**). Finally, the

newly incorporated innovativeness factor is proposed to influence the affective responses to situations and to function as a moderator, strengthening the positive effects of both the setting and the learning history on consumer opt-in choices.

CHAPTER THREE

RESEARCH METHODOLOGY AND EXPLORATORY STUDY

1. Introduction

This research seeks to explore ways of stimulating consumer opt-ins for m-advertising from a behavioural perspective, applying the Behaviour Perspective Model (BPM). The BPM has contributed to an understanding of consumer choice in a wide range of contexts and is currently a core radical behaviourist model in the sphere of complex human behaviours, which still continues to develop and grow in the number of its theoretical and empirical applications (c.f. Foxall, 2010). The proposed radical behavioural perspective on the issue based on the BPM therefore represents an original alternative to predominantly cognitive interpretations of the opt-in choice available in the existing m-advertising literature.

In seeking to explore the BPM's potential to enlighten understanding of consumer opt-in choice, *Chapter Two* has discussed the model's key components and, based on previous relevant studies, proposed ways of interpreting and applying these constructs in the chosen context. The discussion in *Chapter Two* has demonstrated that opt-in determinants can be fruitfully interpreted within the BPM, thus substantiating the proposition of the model's potential to provide a comprehensive explanation of opt-in behaviour. Furthermore, guided by considerations of m-advertising being a relatively new service, *Chapter Two* has put forward the proposition that consumer innovativeness would also play an important role in the opt-in choice. Therefore, in applying the BPM, this research extends the analysis by incorporating the innovativeness factor into the model. Specifically, this thesis seeks to explore whether innovativeness would function as a moderating variable – i.e. whether the effects of behaviour determinants suggested by the BPM on the opt-in choice would differ across adopter segments.

This chapter is therefore focused on the task of examining the respective roles of the research model's basic components – the principal BPM constructs and the consumer innovativeness – in determining m-advertising opt-in choice. With the present project being the first in a series of three planned projects, this Chapter begins by explaining the philosophy of behaviourism, the nature of behaviourist methodology and the implications it has for the method selection in this thesis as a whole (*section 2*). Based on this, this chapter outlines a general approach to the inquiry in this thesis and details specific objectives for each project (*section 3*). Moving from

a general approach to the main objective of this Chapter, this Chapter focuses on the first empirical project. It specifies the methods Project I adopts (*section 4*), reports the findings and discusses the results (*section 5*).

2. Science and Interpretation in Behaviourist Inquiry

Imperative for every empirical research study is the question of the philosophical position that guides the inquiry. Since a philosophical stance adopted in a study has strong implications for how the research is conducted (Burrell & Morgan, 1979; Holden & Lynch, 2004; Remenyi, Williams, Money, & Swartz, 2005), Guba and Lincoln (1994, p.105) assert that "questions of method are secondary to questions of paradigm". With this view in mind, it is important to discuss the issue of research philosophy in detail.

The term philosophical stance generally refers to the "basic belief system" (Guba & Lincoln, 1994, p.107) or "assumptions about the nature of the social world and the way in which it may be investigated" (Burrell & Morgan, 1979, p.1). Burrell and Morgan (1979) develop a framework for analysing four sets of assumptions: (1) assumptions which relate to how a researcher views reality (ontological assumptions), (2) assumptions which relate to the nature of knowledge (epistemological assumptions), (3) assumptions which relate to the relationship between reality and human beings (assumptions about human nature), and (4) assumptions which relate to the method of acquiring information (methodological assumptions) (**Figure 10**).

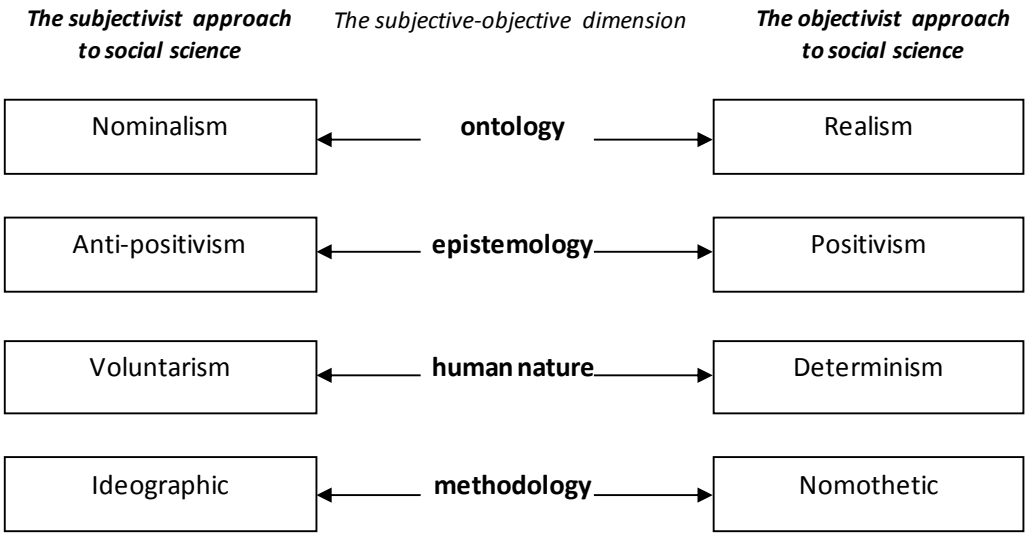


Figure 10: A scheme for analysing assumptions about the nature of social science

Source: Burrell and Morgan (1979, p.3)

The two extremes within each set of beliefs are the objectivist (positivist) and subjectivist (interpretive or anti-positivist) stances which are located on opposite sides of the argument (Burrell & Morgan, 1979). On an ontological level, while the objective stance assumes the existence of a single reality and universal truth that can be found through objective research, subjectivism sees reality as being socially constructed and unique for every individual. On an epistemological level, objectivism perceives knowledge as being "hard, real and capable of being transmitted", while subjectivism sees knowledge as "a softer, more subjective, spiritual or even transcendental kind, based on experience and insight of a unique and essentially personal nature" (Burrell & Morgan, 1979, pp.1-2). Furthermore, subjectivism sees humans as parts of the reality capable of shaping and *controlling* it, whereas objectivism posits that humans are in fact *controlled* by the reality. As far as methodology is concerned, subjectivism is predominantly concerned with learning about reality by means of observation and phenomenological inquiry, whereas objectivism mainly relies on scientific methods (Burrell & Morgan, 1979).

The positivist stance has been under much criticism during the last few decades (Remenyi et al., 2005, p.33; Szmigin & Foxall, 2000, p.187; Tadajewski, 2004). For example, Belk (1995) argues that the era of positivism has passed: he observes that the old methods are now increasingly being overtaken by interpretive perspectives. Similarly, in the field of marketing, Hirschman (1986) argues that an interpretive approach is best suited to studies aimed at understanding the complexities of consumer behaviour.

Despite these criticisms, however, the argument remains that although positivist and interpretive stances are often thought of as two opposing positions, neither of these stances can be considered superior (Guba & Lincoln, 1994; Remenyi et al., 2005; Saunders, Lewis, & Thornhill, 2007). In fact, since the two stances each have their weaknesses and strengths, they should be seen as complementary rather than mutually exclusive (Hudson & Ozanne, 1988; Hunt, 1991, 1993, 2003; Lee, 1991; Remenyi et al., 2005, p.37; Szmigin & Foxall, 2000). For example, Hudson and Ozanne (1988) review and discuss various middle-ground positions between the two extremes, and McGregor and Murnane (2010, p.423) further add that neither of the perspectives would be complete in isolation. The trend towards multiple paradigm research is now emerging and is soon expected to spread from organisational science, where multiple paradigm views are already being widely adopted, to the area of marketing science (Tadajewski, 2004). Given the complementary nature of the two stances, numerous possibilities for settling a research study at any point in *between* these two extremes of objectivism and subjectivism are frequently stressed (Burrell & Morgan, 1979; Remenyi et al., 2005).

In line with the above argument, modern radical behaviourism does not adopt either of the two extreme views. A commonly held view of behaviourism is that it was positioned at a purely objectivistic end of the continuum; although this was indeed true for early Watsonian behaviourism, it is no longer the case for modern radical behaviourism (Baum, 1994; Foxall, 1995c, p.148, 1997; Moore, 2010). Therefore, radical behaviourism should not be attributed with the same extreme positivism characteristics as classical behaviourism (Baum, 1994; Foxall, 1995c, p.148, 1997a; Moore, 2010).

While still relying heavily on quantitative methodologies, just like the earlier classical behaviourism, radical behaviourism, unlike Watsonian behaviourism, never claimed there was an objective truth and never attempted to find it (Leigland, 2010). In fact, radical behaviourism was never concerned with ontological and epistemological assumptions- it explicitly rejected the subjective-objective dimension and focused exclusively on the practical task of *determining* human behaviours (Day, 1969; Foxall, 1995c; Leigland, 1999, 2010; Moore, 1995). In other words, philosophical stance of radical behaviourism is *pragmatism* - the paradigm oriented towards finding the most practical explanations of phenomena rather than the universal truth (Baum, 1994, p.18; Leigland, 1999, 2010; Moore, 2008). That is, rather than searching for an objective truth, it relied on *utilities* of explanations in terms of effective actions and used these utilities as criteria for the truth (Leigland, 2010), a position which corresponds with the earlier argument that neither objectivism nor subjectivism should be considered superior (Guba & Lincoln, 1994; Remenyi et al., 2005; Saunders et al., 2007).

Moreover, radical behaviourism holds an *interpretative* potential, which historically has been the almost exclusive prerogative of subjectivism (Baum, 1994; Foxall, 1995c, 1997). This interpretive power is two-fold. Firstly, Skinner (1974) explains that the interpretive potential of radical behaviourism lies in "an orderly arrangement of well-known facts, in accordance with a formulation of behaviour derived from an experimental analysis of a more rigorous sort" (Foxall, 1995c, p.27). In other words, radical behaviourism focuses on the interpretation of *outcomes* rather than causes, and its interpretive value is mostly practical rather than explanatory.

Secondly, with regards to interpretation in terms of explanation, the learning history which represents past contingencies of behaviour and thus gives *meaning* to behaviour is the embodiment of radical behaviourism's interpretive power (Foxall, 1995c, p.27, 1999c, p.143; Skinner, 1974). This interpretive potential, whether coming from its ability to provide verifiable pragmatic explanations of behaviour, or from its capacity to explain the meaning of

behaviour from past contingencies, makes it possible to regard modern radical behaviourism as an "intermediate" philosophical position (Burrell & Morgan, 1979).

Notwithstanding this intermediate position, methodologically, radical behaviourism still remains positivistically-inclined in the sense that objective quantitative methods are preferred to qualitative techniques. Just like classical behaviourism, it relies mainly on observations of actual behaviour. An important deviation of radical from classical behaviourism, however, is that in human behaviour analysis, it does not rely on observational methods as much as early behaviourism. To elaborate, classical behavioural studies were historically based on *animal* experimentation in operant laboratories. Such simplistic situations isolated animals from outside conditions and thus allowed researchers to have complete control over the behaviour setting. The resultant functional explanations of behaviour were then extended to human behaviour. However, the feasibility of this unmodified extension of behaviourist principles to complex human behaviours has been called into question (Foxall, 1987).

Firstly, humans often do not conform to the behavioural principles found for animals, and display different susceptibilities to contingencies (Foxall, 1999c, p.143; Horne & Lowe, 1993; Logue, Forzano, & Tobin, 1992; Logue, Pena-Correal, Rodriguez, & Kabela, 1986). Therefore, to account for such possible deviations, radical behaviourism applies interpretive techniques to aid the understanding of human behaviour (Foxall, 1995c, 2007a, 2007b, 2007c).

Secondly, principles obtained in the closed setting of an animal laboratory are not necessarily applicable to human behaviour which occurs in unrestricted and uncontrolled settings, largely due to the fact that human behaviour histories are unknown to researchers (Foxall, 1987, 1995c). Therefore, in situations where the past contingencies of behaviour are unknown or inaccessible, researchers can employ qualitative techniques in a behaviour surrogate capacity (Bolles, 1979; Foxall, 1995c, 2007b; Leek et al., 2000; Mowrer, 1960; Nicholson, 2005; Xiao, 2006). One example of such practice is the use of verbal surrogates of behaviour, such as behaviour reports or attitudinal statements (e.g. Leek et al., 2000; Nicholson, 2005; Nicholson et al., 2002; Xiao, 2006; Xiao & Nicholson, 2010). In such cases, verbal statements collected through qualitative method are seen as behaviours in their own right and are therefore applied accordingly (e.g. Leek et al., 2000). That is, as long as the approach to dealing with the data is aligned with principles of radical behaviourism, the use of qualitative data is not seen as contradicting principles of radical behaviourism. This argument is consistent with recent radical behaviourist investigations of consumer choice that involved qualitative data

collection (e.g. Nicholson, 2005; Nicholson et al., 2002; Xiao, 2006; Xiao & Nicholson, 2010).

In line with the above discussion, this thesis is based on the conviction that neither side of the objective-subjective argument is superior, each having its relative strengths and weaknesses. Therefore, in adopting a radical behaviourist perspective, this research intends to find neither a subjective nor objective truth, but rather an effective way of stimulating opt-in behaviours. Although in the best behaviourist tradition, this thesis remains positivistically-inclined methodologically, in that it relies mostly on objective quantitative methods, it diverges from classical behaviourism, intending to use this quantitative evidence not only for behaviour modification, but also for its interpretation. The interpretive potential of radical behaviourism is to be realised in this thesis through both the process of analysing its characteristic patterns and through the drawing of conclusions about the meaning of these behaviours from the analysis of people's learning histories. The general approach to the investigation is also consistent with the pragmatic logic of radical behaviourism, in that rather than blindly relying on direct observations it utilises more flexible ways of collecting evidence for this new type of behaviour. The next section explains the methodological approach of this thesis in detail.

3. General Approach to Enquiry

As both the industry and the research field are relatively new, there is not sufficient knowledge about the factors influencing opt-in choice to allow a comprehensive investigation of all possible choice determinants. Therefore, approaching the investigation head-on, based on a list of pre-determined factors, would not be appropriate in this case (Creswell, 1994). Considering the newness and uniqueness of the field, the theory is to be built rather than empirically tested. Therefore, this thesis adopts a sequential three-project approach to the investigation of the opt-in choice determinants. This approach not only allows for the issue to be examined in a systematic way (i.e. tackling each group of potential opt-in determinants in a separate project), but also adds a reasonable degree of flexibility to the investigation process.

First of all, in choosing a methodological line of inquiry, a pragmatist needs to account for the type of investigation and base the decision on what methods would be most effective at each particular phase of research (Tashakkori & Teddlie, 1998, p.24). Given that this research consists of a series of projects, it is necessary to ensure that the methods selected for each project match the respective stage of research. Thus, considering the relative newness of this research field, it is most reasonable to begin with an exploratory investigation, in order to check the general applicability of the proposed explanation ("Is physical setting important in

predicting opt-in choice?"), and then move on to a systematic analysis of the proposed relationships ("How strongly does it influence the choice?"). In other words, a reliable systematic analysis can only be justified after the general argument underlying the research propositions has been empirically validated. Hence, a prior exploratory investigation is deemed necessary.

Besides merely validating the proposed behavioural explanation as a whole, the preliminary exploratory investigation will serve the instrumental purpose of identifying key factors influencing the opt-in choice for operationalising the BPM construct at later research stages. Most importantly of all, as new behaviour contexts, such as m-advertising opt-ins, clearly fall into the category of behaviours of which very little is known, the use of qualitative techniques to gain insights into past contingencies of behaviour is both a practically justified and theoretically legitimate measure (Bolles, 1979; Foxall, 1995c, 2007b; Leek et al., 2000; Mowrer, 1960; Nicholson, 2005; Xiao, 2006).

Consistent with the above argument, the research adopts a mixed-method approach to investigation, where the focus is on quantitative analysis, whereas qualitative methods are utilised in a preliminary capacity. In mixed-method research, with a primarily quantitative orientation, such as this work, the practice of using qualitative techniques at early enquiry stages to produce data for later quantitative tests is common (Creswell, 1994; Morgan, 1996, p.134; Wolff, Knodel, & Sittitrai, 1993).

The rationales and objectives of the intended projects are as follows. Project I is designed to contribute to *Objective One* of this thesis, which is to identify factors affecting opt-in choice by conducting a preliminary investigation into the respective roles of the four main components of the research model: behaviour setting, learning history, choice consequences and the most readily available notion of *actualised* innovativeness. Based on the results of Project I, Project II seeks to analyse the effects of BPM elements and that of the innovativeness factor *systematically* by employing a quantitative methodology. It also progresses to examine the *predictive* power of innovativeness by operationalising it as *domain-specific* rather than actualised. Additionally, Project II serves the purpose of analysing *inter*-relationships of the main opt-in predictors or the *combined* situational influences on choice. Thus, Project II is designed to fulfil *Objectives One and Two* of this thesis. Following the results of Project II, Project III is designed to test the developed approach for stimulating opt-ins through laboratory experimentation and thus represents behavioural methodology in its purest form. Specifically, it builds upon the most effective implementation techniques identified in Project II and tests them in a naturalistic setting.

Upon specifying the rationales for each project, this chapter now proceeds to its main empirical purpose by documenting the process and findings of Project I which tests the three basic propositions of this thesis (**Figure 11**).

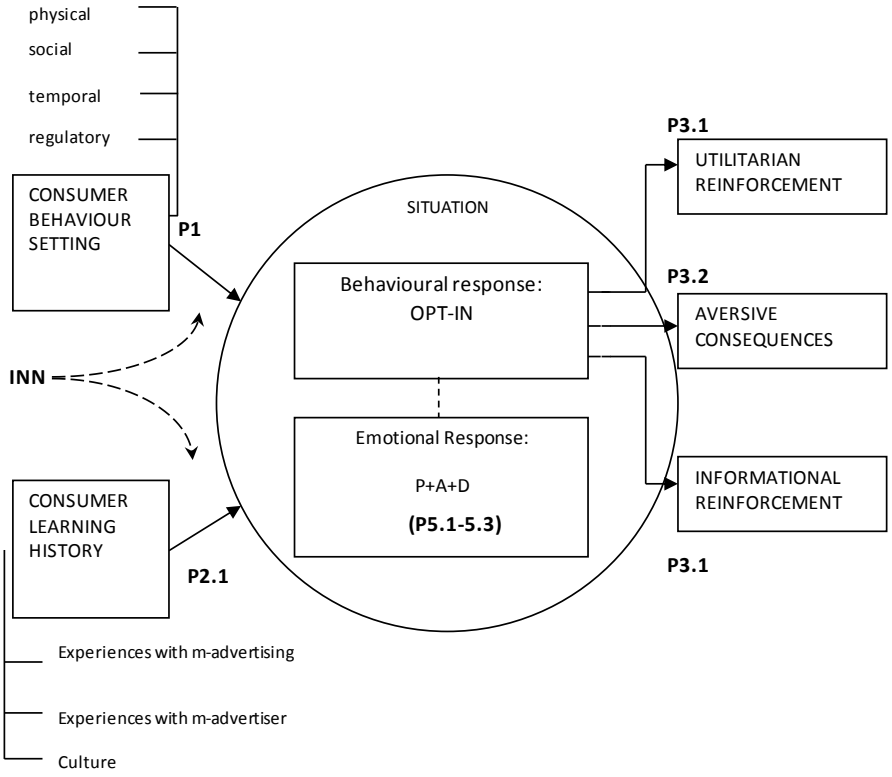


Figure *11:* *Project I propositions*

4. Research Design

4.1 Instrument

In seeking to generate items for further systematic analysis, Project I employs focus group discussions which are commonly known to be most suitable for exploratory purposes (Frey & Fontana, 1991; Kitzinger, 1994, 1995; Krueger, 1988; Morgan, 1996; Wilkinson, 2004). Because of the unrivalled capacity to generate ideas focus groups are commonly recommended for exploratory studies and particularly for situations where very little is known about the topic (Byers & Wilcox, 1991, p.75). As this is certainly the case with m-advertising, this instrument seems most appropriate.

There are many unique advantages of using this instrument for item generation. In particular, the social context of focus groups and evolving relationships, both between the moderator and

the group and among the participants themselves, constantly stimulate the expression of ideas, making participants explore and clarify their opinions on the subject (Frey & Fontana, 1991; Kitzinger, 1995; Vogt, King, & King, 2004). This constant interaction advantageously distinguishes focus groups from other qualitative methods such as face-to-face interviews (Kitzinger, 1994; Morgan, 1996). In addition, the social setting of focus groups encourages participants to build and elaborate on each other's ideas, thereby producing more detailed data than would be produced in a one-to-one session with the interviewer (Stewart, Shamdasani, & Rook, 2007; Vogt et al., 2004).Yet another advantage of the focus group over individual interviews lies in the instrument's ability to make participants feel more comfortable to express their ideas than they would be if asked to discuss them with the interviewer one-on-one (Burns & Bush, 2003; Vogt et al., 2004). This open exchange of ideas thus further improves the instrument's suitability for item development. Focus groups are also particularly useful for *phasing* survey items because direct interaction with participants allows researchers to gain an understanding of how they describe the phenomena of interest (O'Brien, 1993). Previous successful uses of focus group discussions in behavioural studies (Leek et al., 2000; Nicholson et al., 2002), as well as in m-advertising literature (Bamba & Barnes, 2007; Carroll et al., 2007), further substantiated the selection of the focus group instrument for Project I.

With regard to the format of focus group discussions, the choice was guided by several considerations. Firstly, it is commonly advised that focus groups are conducted in a neutral setting that would be convenient for participants to access, and where they would feel comfortable (e.g. Krueger, 1988, 1994; Morgan, 1996, 1997). Since in online discussions, participants are accessing the Internet from their homes, offices or other familiar locations, conducting focus groups online was deemed most appropriate (Burns & Bush, 2003; Mann & Stewart, 2000, p.106). Secondly, as the target behaviour (i.e. opt-in) normally requires basic technological skills, it was in the interest of the research to focus on consumers who are comfortable with technology. As participation in an online discussion required basic computer skills, the choice of an online facility helped to focus only on those consumers who represented the population of interest. Finally, since the number of mobile users exceeds the country population (Ahonen, 2006; Mintel, 2010), it was important to capture the opinions of geographically dispersed mobile phone users. As participants were not required to travel to a physical facility, the use of an online facility allowed them to be recruited from a wide geographical area, thus improving the sample representativeness (Mann & Stewart, 2000). Therefore, the decision was taken to conduct discussions in a web-based setting.

4.2 Participants

One criticism of focus groups is that as focus groups normally involve a small number of participants, this method is susceptible to sample composition bias and group atypicality (Hughes & DuMont, 1993). To overcome this problem, a common approach is to conduct several group discussions with at least 5 groups (Morgan, 1997). Following this recommendation, the data collection utilised a total of 6 focus groups discussions (n=34); a number which compares favourably with the recommended range of 4 to 6 group discussions per study (Krueger & Casey, 2001).

The groups involved an average of 6 participants, which is consistent with the general notion that the optimal size of the focus group is 6 to 15 people (Burns & Bush, 2003; Krueger, 1994). The lower end of the recommended range was used because of the online format specifics. In particular, in online group discussions, it is important to use a relatively small number of participants in each group because having too many participants will result in the discussions moving too quickly (Mann & Stewart, 2000). Mann and Stewart (2000) particularly emphasise that in online discussions participation depends on the speed of typing and when there are too many people participating, the flow of ideas may be too fast for those with slower typing speeds to catch up, which can eventually result in participants not expressing the ideas they would have otherwise shared (Mann & Stewart, 2000).

The participants were mainly recruited through personal connections. All participants were UK-based because according to the latest data, the UK is currently the largest and one of the most advanced m-advertising markets in Europe (Smaato, 2010, p.5). Out of the 36 people who gave their consent to participate, 34 took part in the focus groups.

Additionally, based on the recommendation to segment participants into homogeneous groups to improve in-group interaction (Morgan, 1996; Sim, 1998), the participants were divided into three groups based on their m-advertising usage patterns: non-users, occasional users and regular users. Since this segmentation was based on participants' levels of experience with m-advertising at the time when the data was collected or on the relative *earliness* of m-advertising adoption, it also served the purpose of evaluating the effect of *actualised* innovativeness on consumer susceptibilities to BPM components. Although the actualised innovativeness holds no predictive potential (Goldsmith & Hofacker, 1991; Midgley & Dowling, 1978) and thus is not used in the research model, in Project I it is used to test the *principal* relevance of this construct to the explanation: i.e. whether or not people with different levels of *observable* innovativeness would have different susceptibilities to the BPM factors.

The participants were assigned to the groups based on preliminary verbal screening. They were asked to tell whether they used m-advertising and if so, were also asked to describe how long and how they use it and then classified into respective groups accordingly. Occasional users mainly consisted of people who opted-in to receive promotional information directly from advertisers they chose. Regular users were those who signed up to an ad-funded mobile phone network (Blyk) and, under the contract conditions, received up to 6 messages a day from selected advertisers in exchange for monthly mobile credit. In contrast to occasional users, regular users did not necessarily have any relationship with the advertiser and permission had been given exclusively to the service providers to select advertisers to suit the subscribers' interests.

4.3 Procedure

An important requirement when conducting focus group discussions is to create a comfortable, permissive environment (Frey & Fontana, 1991; Krueger, 1994; Mann & Stewart, 2000). Since in online settings, participants do not have access to encouraging visual cues signalling that they are doing well (e.g. smiling, nodding), it is recommended to act pro-actively and post a friendly welcome message prior to starting the discussion (Mann & Stewart, 2000). Posting a welcome message was also important because of possible confusion with the term "m-advertising" (Salo & Tähtinen, 2005). Therefore, participants were asked to log on to the focus group webpage 10 minutes before the discussion began to read the greetings and familiarise themselves with the concept of m-advertising.

The discussions were semi-structured and the order of questions was largely determined by the themes which emerged during the discussions as well as the group dynamics. Each element of the BPM was represented by at least one question. The questions were loosely structured, allowing participants to express their ideas freely (e.g. "Why would you use m-advertising?", "What factors would affect you in opting-in or refusing to opt-in for m-advertising?"). These types of open-ended questions are commonly recommended for studies where the purpose is exploratory (Frey & Fontana, 1991; Krueger, 1988, 1994; Krueger & Casey, 2001). In situations where participants hesitated or misunderstood the questions, further clarifications were given to facilitate the discussions. In line with recommended level of moderator involvement in exploratory studies (Frey & Fontana, 1991), the moderator's participation was limited to asking questions, clarifying questions and asking for response clarifications when she felt it was necessary. Also, as recommended (Wilkinson, 2004), to facilitate group interaction, the moderator actively encouraged the group's opinions on new ideas (e.g. Do you agree with what X just said?) and tried to involve less active participants in

the discussion (e.g. X, what do you think?) (Kitzinger, 1994). A relatively passive role of moderator is commonly recommended as good practice for facilitating intra-group interaction and expression of ideas (Sim, 1998).

The duration of discussions varied from 90 to 120 minutes, depending on the group dynamics. In particular, in several groups, more time was necessary to cover the intended discussion themes (BPM elements) due to frequent changes of direction, while in other less active groups additional time was necessary to encourage idea development. Allowing sufficient time for topic elaboration and development of ideas is a commonly recommended practice (Hedges, 1985).

4.4 Analysis

Since the discussions were conducted online, no transcriptions were necessary. With regard to data analysis, Millward (2006, p.291) argues that there is no correct way of analysing focus group data and that the decision of which form of analysis to employ should be based on the issue of interest: i.e. whether the researcher is interested in the content or the process (group dynamics) of the discussions. As the main interest of Project I was in identifying factors affecting choice, content analysis was deemed more appropriate than analysis of group dynamics.

Next, it was necessary to decide whether the content data should be analysed quantitatively or qualitatively (Millward, 2006, p.292). At this point it should be noted that although Project I adopted a qualitative approach for data collection, it remains true to behavioural methodology in its interpretation of data. Therefore, statements that emerged during the group discussion data were regarded as behaviours, and quantified and analysed using statistical methods.

It is commonly advised that prior to constructing an analysis of the discussion data, the researcher needs to decide on the unit of analysis: i.e. what is to be quantified (Millward, 2006; Wilkinson, 2004). As this project sought to test the viability of the BPM components in explaining the opt-in choice, it was necessary to sensibly interpret participants' ideas rather than rely on the mechanical counting of instances a particular word was mentioned (Millward, 2006). Therefore, participants' verbal statements were used as units of analysis and the data was coded thematically based on their interpretation. The next step was to develop a coding guide to allow the systematic interpretation of data. As recommended (Millward, 2006), the coding guide was developed on the basis of target material: i.e. the BPM components that were to be interpreted.

Previous research has shown that behaviour setting elements can have both positive and negative influences on consumer choice (Nicholson et al., 2002). For example, the conciseness of m-advertisement can be interpreted as a positive physical factor which stimulates opt-ins, and its opposite, the lengthiness of m-advertisement, is thus a repelling physical factor. Based on this logic, the collected data on most of the setting elements were sub-coded into positive and negative factors, in the same manner as the opt-in choice consequences. However, regulatory factors were an exception to this rule. Given that regulatory factors are defined as restricting rules that organisations impose on consumers, it is possible to argue that there is a limited possibility, if any, of them adding appeal to m-advertising and serving in a stimulating function. Thus, coding them as negative stimuli was deemed appropriate. Following the method of previous behavioural studies (Nicholson, 2005; Nicholson et al., 2002), the data was coded using thematic content analysis into 11 clusters, each representing a setting or a behaviour consequence element of the BPM: "*Physical+/-", "Social +/-", "Regulatory-", "Temporal+/-", "Utilitarian Consequences+/-", and "Informational Consequences +/"*- (**Table 1**).

BPM component	Examples of positive (opt-in facilitators) items	Examples of negative (opt-in inhibitors) items
Physical Setting	Entertaining content (e.g. videos, games), price information, bargain information, customised content, relevant content, information conciseness, lack of other information sources within immediate reach, user's location, good content design, etc.	Irrelevant content, poor design and presentation, long text, substitutability of information, etc.
Social Setting	Peer pressure, m-advertising popularity, etc.	immediate social context (e.g. being with someone, being in a crowded place), etc.
Temporal Setting	Leisure time, possibility to specify delivery times, time urgent, season, sales, etc.	Inappropriate timing (e.g. night delivery, busy time), out of season m-advertisements, etc.
Regulatory setting	---	Requirements for registration requirement, answer forms, additional software download, contract conditions, etc.
Utilitarian Reinforcement	Voucher, bargain information, saving time, filling time. hedonic benefit, socialisation benefit, informativeness, mobility/convenience, etc.	-----
Utilitarian Punishment (aversive consequence)	------	Risk of being charged, disappointment, interruption, spam, data security risks, waste of time, irritation, etc.
Informational Reinforcement	Being perceived by others as fashionable, technology savvy, knowledgeable , etc.	------
Informational Punishment (aversive consequence)	-----	Being perceived by others as money-conscious or as someone having financial difficulties, etc.

Table 1: Examples of coding

The coding process was based on the literature review and other previous studies specifying the nature of the investigated elements (Barker, 1968; Belk, 1974; Nicholson, 2005; Nicholson et al., 2002). For example, as the discussion in Chapter Two has shown that timeliness of m-advertisements is an important temporal factor affecting opt-in choice (e.g. Bamba & Barnes, 2007; Carroll et al., 2007), statements where participants indicated the importance of having advertisements delivered at times when they need the information were coded as "Temporal+" (timeliness). Similarly, in line with the earlier discussion on physical setting, which demonstrated the importance of m-advertising length in consumer opt-in choices (Barwise & Strong, 2002; Leek & Christodoulides, 2009), statements where they stressed that messages should be short were coded as "Physical+" (conciseness).

With regard to the negatively coded behaviour setting items, these were based on previous applications of this methodology (Nicholson, 2005; Nicholson et al., 2002), and essentially mirrored the concepts discussed in Chapter Two. For example, the fact that short message length ("Physical+") positively influences opt-ins is also reflected in the fact that long m-advertisements ("Physical-") have an off-putting influence. The negative influences of setting were thus coded based on the same logic as positive components, as previously done in other studies (Nicholson, 2005; Nicholson et al., 2002).

Also, as discussed in Chapter Two, physical factors that have an additional capacity for producing benefits for subscribers should be categorised as both the physical characteristics of m-advertising and reinforcements. Therefore, such factors were coded into both categories. For example, where participants indicated their desire to receive m-advertisements that are directly relevant to them, such responses were coded as both "Physical+" (informative content) and "Utilitarian+" (usefulness), and cases where they emphasised the importance of entertainment were coded as both "Physical+" (entertaining content) and "Utilitarian+" (hedonic benefit).

With regard to the learning history element, although it was initially intended that this be analysed in the same fashion, the data has shown that such analysis would have been inappropriate for this particular BPM component. This is because, in contrast with the setting and the consequences factors, learning history items, such as participants sharing stories about m-advertising and experiences with m-advertisers, were very infrequent due to their narrative nature. Whereas the expression of ideas about m-advertisements' characteristics did not need to be lengthy and could be easily communicated, instances of experience sharing were not as frequent. Applying the same frequency-based technique to analyse individual histories would diminish the importance of the shared past experiences despite the importance participants

attached to those stories. Therefore, it was decided to separate past experiences from the main body of data and to analyse them individually.

To ensure reliability of findings, the data on setting and opt-in consequences was first coded by the researcher and then handed over to another rater, who was asked to correct coding items with which he disagreed. Based on the corrections by the second coder, the author made adjustments to the coding. After this procedure, a concordance rate of 90.57% was achieved, with 1555 observed agreements after necessary corrections by the researcher. Also, as recommended for cases with only two raters (Hammond, 2006), Cohen's kappa (Cohen, 1960) was computed using the formula below:

$$\kappa = \frac{P(a) - P(e)}{1 - P(e)}$$

Where P(a) is observed agreement between raters and P(e) is a probability of chance agreement. To calculate the P(e), the number of agreements and disagreements on each of the 11 BPM elements were analysed using a computer program. The calculated number of agreements expected by chance was 427.4 or 24.89%. Hence, Cohen's kappa was 0.874, indicating a very good strength of agreement (Landis & Koch, 1977).

$$\kappa = \frac{0.9057 - 0.2489}{1 - 0.2489} = 0.874$$

As the categories were not ordered (i.e. the order of categories did not imply relatedness between the constructs), the use of weighted kappa to further analyse the degree of agreement was not necessary

However, as this coding was later to be used as a basis for survey items in Project II, it was very important to ensure high reliability of the analysis. Although a one-tailed t-test is usually considered appropriate for most studies, for cases where reliability is especially important, Sim and Wright (2005) recommend setting the value of null hypothesis to a higher level than zero and using a 2-tailed test. Therefore, the null hypothesis value was set to .50 and a 2-tailed with 95% confidence interval was conducted. With the set parameters, the interval was from 0.856 to 0.893. Since the interval did not cross the value of .50 it was concluded that concordance satisfied the elevated criteria and was statistically significant (Sim & Wright, 2005).

The reliability test was followed by the data analysis which was conducted as follows. Firstly, a general contingency table was constructed, which categorised the responses into groups of BPM (Foxall, 1990, 1997a) factors on the basis of the coding procedure. Then a separate

contingency table was created for each BPM component to allow a more detailed analysis. At each stage, the data was analysed quantitatively by comparing the number of times each BPM factor was mentioned. In addition to cross-factor comparisons, the analysis involved inter-group comparisons among non-users, occasional users and regular users. Whereas cross-factor comparisons made it possible to identify the most important factors influencing opt-in choice, inter-group comparisons provided additional insights into differences in opt-in determinants among the three user segments (i.e. groups with different levels of actualized innovativeness). Finally, the learning histories were assessed using more traditional qualitative techniques that are commonly recommended for instances where researcher is interested in behaviour meaning (Millward, 2006).

4. Results and Discussion

4.1 Result Overview

On the basis of the coding process, a contingency table which summarised frequency counts for each type of behaviour setting and behaviour consequences was constructed to enable analysis of the relative effects of the proposed factors (**Table 2**). Since negative social factors and regulatory factors have not been mentioned, the resultant contingency table had 9x3 dimensions. Out of 27 cells, only 3 cells (11.1%) had a frequency of less than 5, indicating that Chi-square assumption concerning "minimum expected cell frequency" (at least 80% of cells should have frequencies more than 5) was not violated (Pallant, 2005).

For BPM elements that consisted of more than one factor (e.g. physical setting included m-advertisement length, content design etc), a separate contingency table detailing the construct composition and frequency counts was constructed, creating a total of 7 separate contingency tables for "Physical+/-", "Social+", "Temporal+", "Utilitarian+/-" and "Informational+" factors (itemised tables in **Appendix 1**). The composition of these elements is reported and discussed in this section. The elements which consisted of only a single factor, namely "Temporal-" (inappropriate delivery time, *n=69*) and "Informational+" (positive feedback from peers, *n=4*), did not require such analysis and are analysed in this section only in relation to that single factor.

With regard to the actualised innovativeness, following previous behavioural studies which employed this method for data analysis (Nicholson et al., 2002), a Chi-square test was used to explore the relationship between user type (non-users, occasional users, regular users) and the frequency counts for BPM elements (i.e. susceptibility to these factors). The Chi-square test showed that there were significant differences between the three user groups in the frequency counts of the BPM's setting and behaviour consequences elements (χ^2=151.300;

df=16;p<.001), thus providing preliminary support for the proposition that susceptibilities to the BPM components would vary across the adopter segments.

Table 2: Cross-tabulation of BPM elements and user groups			Non-users	Occasional users	Regular users	Total
BPM elements	**Physical +**	Count	131	163	105	**399**
		Expected count	147.8	146.6	104.6	399.0
		% within BPM element	32.8%	40.9%	26.3%	100.0%
	Physical -	Count	47	45	7	**99**
		Expected count	36.7	36.4	25.9	99.0
		% within BPM element	47.5%	45.5%	7.1%	100.0%
	Social +	Count	9	10	23	**42**
		Expected count	15.6	15.4	11.0	42.0
		% within BPM element	21.4%	23.8%	54.8%	100.0%
	Temporal +	Count	16	7	4	**27**
		Expected count	10.0	9.9	7.1	27.0
		% within BPM element	59.3%	25.9%	14.8%	100.0%
	Temporal -	Count	23	23	23	**69**
		Expected count	25.6	25.4	18.1	69.0
		% within BPM element	33.3%	33.3%	33.3%	100.0%
	Utilitarian Reinforcement	Count	162	224	215	**601**
		Expected count	222.6	220.9	157.5	601.0
		% within BPM element	27.0%	37.3%	35.8%	100.0%
	Utilitarian Punishment	Count	223	153	67	**443**
		Expected count	164.1	162.8	116.1	443.0
		% within BPM element	50.3%	34.5%	15.1%	100.0%
	Informational Reinforcement	Count	1	0	3	**4**
		Expected count	1.5	1.5	1.0	4.0
		% within BPM element	25.0%	.0%	75.0%	100.0%
	Informational Punishment	Count	24	6	3	**33**
		Expected count	12.2	12.1	8.6	33.0
		% within BPM element	72.7%	18.2%	9.1%	100.0%
Total		Count	636	631	450	1717
		Expected count	636.0	631.0	450.0	1717.0

Note: χ^2= 151.300; df= 16; p<0.001

The discussion that will follow consists of five parts. Firstly, the BPM components are cross-compared to identify the most important factors. Then, the composition of the behaviour setting and the behaviour consequences factors are separately analysed and discussed. This is followed by a discussion on the effect of participants' learning histories on their opt-ins, which is analysed separately. Finally, to analyse cross-group differences in susceptibilities to these factors, a separate discussion is provided for each of the three user segments.

4.2. Cross-Factor Analysis

Generally, as **Table 2** shows, the results have revealed that consumer opt-in choice is strongly influenced by a range of both contextual factors and behaviour consequences. Among the positive behaviour setting elements, physical elements of the setting were most frequently mentioned (n=399), followed by social and temporal settings (n=42 and n=27, respectively), which both appear to be considerably less important than physical factors. In line with the

expectation of regulatory factors having very limited appeal, the participants did not mention regulatory factors among the positive factors. Similar results were obtained for the negative setting factors: participants most frequently reported negative physical (n=99) and temporal (n=69) factors as off-putting. This again highlights the dominating role of physical factors in the m-advertising context.

Interestingly, participants mentioned neither negative social nor negative regulatory factors. One explanation for this can be the general vagueness surrounding m-advertising. With regard to negative social influences, the absence of m-advertising popularity (a presumably a negative social factor) may not necessarily be seen by potential users as discouraging: they might attribute it to other people rather than m-advertising itself and, thus, remain unaffected by any negative influences from others. As far as negative regulatory factors are concerned, a plausible explanation for the fact that they were not mentioned may be that while non-users and occasional users could not name any negative influences due to their lack of experience with m-advertising, regular users, who have already willingly subscribed to daily m-advertising, clearly did not see them as in any way discouraging.

With regard to the opt-in consequences, as seen in **Table 2**, utilitarian benefits proved considerably more reinforcing than informational rewards (n=601 and n=4, respectively). These results suggest that consumers are primarily focused on tangible service characteristics and practical benefits rather than image-related factors. Infrequent mentions of informational factors may be explained by the fact that although mobile phones are highly visible, the *use* of mobile phones is private, which makes observable aspects of the m-advertising use relatively insignificant.

Similar results were obtained for negative consequences. In particular, compared to utilitarian punishments, informational punishments appear to have a weak effect on consumers (n=443 vs. n=33, respectively), which is consistent with past studies (Pura 2005). It is noteworthy that although both informational reinforcements and informational punishments were rarely mentioned, informational punishments appear to have a slightly stronger effect on participants than positive informational consequences (n= 4 vs. n=33, respectively). This suggests that although consumers are not affected by informational benefits when making an opt-in choice, they can still be discouraged from opting-in for m-advertising by related image risks.

Given that most of the BPM elements included a number of sub-factors, at this stage it is necessary to discuss each factor group in detail.

4.3 Behaviour Setting

- **Physical Setting**

Moving from general to more specific analysis (based on factor composition in **Appendix 1**), the most important physical factor is *content informativeness*. Informativeness was the most frequently mentioned positive physical factor (n=192), whereas its opposite, low informativeness, was the most frequently mentioned negative physical factor (n=70). This finding is consistent with previous m-advertising research (Bamba & Barnes, 2007; Barwise & Strong, 2002; Carroll et al., 2007; Leek & Christodoulides, 2009; Merisavo et al., 2007; Rettie et al., 2005; Trappey III & Woodside, 2005). Respondents have agreed that they would only opt-in for m-advertising if the information is relevant to their preferences and general interests:

> **Participant 1:** *"I want things I can use…If Tesco sends me mobile vouchers to use in store I would be happy but if I get a discount* [mobile coupon] *for DVDs I would not care because I do not use them".*

> **Participant 2:** *"I would use it when need something and they send me information about this. The main thing is that the texts I get are not general but based on what I want"*

In addition to relevance of the content, *promotional price content* also appears to be an important stimulating factor in opt-in choice (n=121). In other words, m-advertisements containing information about product prices and ongoing promotions are appealing to consumers and are therefore likely to encourage subscriptions. On the whole, the fact that content informativeness and price content are the two most frequently mentioned physical factors further supports the argument that consumers are mainly concerned with direct pragmatic benefits of m-advertising use.

Also, although less frequently mentioned than informativeness and price, *entertaining content* has also proven an important positive physical factor (n=44). In addition to entertaining features of m-advertising, such as mobile games, consumers have specifically indicated interest in entertaining videos, such as amusing TV advertisements and popular video clips, which is in line with previous research (Bauer et al., 2005; Merisavo et al., 2007; Okazaki, 2004; Tsang et al., 2004; Xu, 2006-2007; Zhang & Mao, 2008).

Relatively limited attention to other factors, such as *content design* (well-designed n=15; poorly designed n=8), *m-advertisement length* (short n=12; long n=11) and user's *location* (n=7), has further demonstrated that consumers are generally focused on practical aspects of

m-advertising, preferring price content and content informativeness to less functional characteristics. Similarly, the importance of customising content to *mobile phone's capabilities* (i.e. sending WAP links only to WAP enabled phones) was only mentioned several times (n=8), which could have been caused by participants assuming that m-advertisements should be automatically customised to their device models.

- **Social Setting**

With regard to positive social factors, *personal recommendation* (n=30) appears to have a slightly stronger effect on participants than *overall popularity* of m-advertising outside one's personal network (n=12). This result is consistent with previous research which also emphasised the importance of peers on consumer behaviour toward new products (e.g. Götze et al., 2009; Leek & Christodoulides, 2009; Valente, 1996).

As participants described:

> **Participant 3:** ***"****I started about a year ago when I joined a salsa class in London. They sent me membership updates every now and then. I can't tell you why I chose to use it, I think it was probably the influence of other group members"*
>
> **Participant 4:** *"I got an invite from a friend with a special code to switch to their network"*

As noted earlier, participants have not mentioned negative social factors.

- **Temporal Setting**

Positive temporal factors mentioned over the course of discussions were of two types. Firstly, participants indicated the importance of *timeliness* (n=20), stressing that m-advertisements that are offered or delivered at a time of need or urgency are likely to be appealing. This finding is consistent with previous studies on m-advertising opt-in where delivery timeliness was also repeatedly emphasised (Bamba & Barnes, 2007; Barnes & Scornavacca, 2008; Carroll et al., 2007; Koivumaki et al., 2008; Merisavo et al., 2007; Pura, 2005; Rettie & Brum, 2001; Salo & Tähtinen, 2005).

Participants give examples of well-timed advertisements:

> **Participant 5** (on the importance of receiving relevant m-advertisements at a time when most likely to use): *"It* [electronic coupon sent via m-advertising] *can be handy if you are planning to invite your friends somewhere, but if not then it is useless"*

> **Participant 6** (on the importance of timeliness): *"Getting good deals when in a store would be good…I mean the timing has to be just right"*

Secondly, a new factor not previously covered in Chapter Two has emerged. Specifically, participants indicated that they would like to receive m-advertisements only at appropriate times when they are free and m-advertising does not distract or irritate them (n=7). From here on, this factor will be referred to as *leisure time.* Although relatively rarely mentioned, it still calls for attention as it represents a new variable not previously accounted for.

Interestingly, negative temporal factors consisted only of *in*appropriateness of time which is the opposite of the *leisure time* factor. For example:

> **Participant 7** (on inappropriate times): "*It won't work when I am buying, in a massive hurry, when I am sleeping, or eating, when I am talking to someone on the phone, when I am expecting an important call or a message, when I am studying, when I don't feel safe…it would be irritating!"*

The opposite of the timeliness factor which would logically be *low* temporal relevance of information (e.g. although the user is available and is generally interested in the product, he/she does not need that information at the moment, such as for example advertisements of snowboards in spring), was not mentioned at all. This suggests that although timely information is an attractive option, consumers do not consider the absence of this possibility as necessarily off-putting. This result can be partly attributed to the fact that the industry is undeveloped and the consumer is not yet spoiled by the advantage of receiving time-sensitive content that the mobile channel can offer (e.g. Figge, 2004; Friedrich et al., 2009; Sharma et al., 2008).

Another important observation is that participants mentioned the *in*appropriateness of time (n=69) much more frequently than they mentioned *time appropriateness* (n=7). This difference suggests that whereas delivery appropriateness is often taken for granted and thus is not seen as much of a stimulus, *in*appropriateness of delivery time is an important off-putting factor.

4.4 Behaviour Consequences

- **Utilitarian Consequences**

Utilitarian consequences proved overwhelmingly important (reinforcements n=601; punishments n=443). Generally, *economic rewards* (n=199) and *m-advertising usefulness* (n= 192) are the top two priorities for consumers. In other words, consumers are mostly attracted

by the practical benefits of using m-advertising, such as earning (e.g. opt-in incentives) and saving money (e.g. free call time) and benefitting from useful information (e.g. relevant information such as new classes offered in one's gym, new features available for the service one is using, etc.). This result is consistent with previous studies into m-advertising opt-in choice (e.g. Merisavo et al., 2007; Rettie et al., 2005; Tsang et al., 2004).

Interestingly, one important new aspect of financial rewards that emerged from discussions was receiving information about promotions that would help them make use of this information by saving. From here on in, this factor will be referred to as *bargain.* For example:

Participant 8 (on bargain): [It would be good] *if they send special deals to my mobile when I pass them by! Like "Fancy a free coffee? We are 20 meters away!" It would be such a cool thing!*

Other reinforcing factors discussed in Chapter Two, such as *hedonic benefits* (n=63), *relieving boredom* (n=45) *improved personal effectiveness* (n=42), *socialisation benefit* (n=40) and *mobility/convenience benefit* (n=20) were also mentioned but significantly less frequently than the benefits of receiving useful information and economic benefits.

As far as utilitarian punishments are concerned, the findings have confirmed the importance of several proposed factors, namely *security and privacy risks* (n=203) and *information uselessness (spam)* (n=70). Concerns about privacy and security were mainly associated with not having enough control over the m-advertising process, receiving an excessive number of advertisements (i.e. data misuse) and risks of unauthorised advertisers contacting them through mobile phone, and were mentioned most frequently, which is consistent with past research (e.g. Bauer et al., 2005; Carroll et al., 2007). The fact that information uselessness is unattractive is hardly surprising. Clearly, subscribers are unwelcoming of information that bears no practical value, and this has also been confirmed by previous studies (e.g. Okazaki, 2004; Rettie & Brum, 2001). The possible of risk of financial loss was not mentioned, which could have been due to participants not thinking of such a possibility. As previous studies have demonstrated, consumers are still going through a learning phase and are not yet familiar with many aspects of m-advertising (Leek & Christodoulides, 2009).

In addition, the discussions have unveiled four additional factors not previously considered in Chapter Two. In particular, participants mentioned *negative emotions* (hedonic costs) associated with receiving m-advertisements (n=102), risks *of distraction from other activities* (n=33), *interruption of mobile phone use* (n=25), and *time wasting* (n=10). Negative emotions

included irritation, feeling lonely and general disappointment from receiving a promotional rather than personal message, indicating that opt-in choice is often related to a wide range of emotional reactions. Distraction risk stemmed from the risk of receiving m-advertising at inappropriate times, for example, when needing to concentrate on studies. Risk of interruption was mainly related to the practical disadvantages of m-advertisements hindering other applications, such as it suddenly appearing when taking a mobile photo. Time wasting factor was also understandable considering that mobile phones are used for a wide range of purposes and irrelevant or unnecessarily long advertisements can involve time costs.

- **Informational Consequences**

Informational punishments were nearly equally divided between *negative feedback from others* (n=16) and *negative feedback from peers* (n=17). In contrast, informational reinforcements only consisted of *positive feedback from peers* (n=4) and not other people. Taken together, one possible interpretation of these results is that people may be equally sensitive to negative feedback irrespective of its source, but positive feedback would only be reinforcing if it comes from a known and trusted source rather than from outside the personal network.

Consumers did not explicitly discuss the nature of such negative feedback mainly referring to it generally as an unpopular activity. In line with expectations, however, some have expressed views that m-advertising can make them appear to be having financial difficulties. For example:

Participant 9: *Say, I am tight on money so I sign up for this mobile advertising thing, ok? I would not want my friends to find this out. That would be kind of embarrassing*

Some have also expressed the view that subscribing to m-advertising for monetary benefits may be seen by others as too money-conscious:

Participant 10: *In my opinion, using something like this* [refers to m-advertising with small benefits such as discounts] *for very little money is kind of cheap.*.

4.5. Learning History

Generally, when asked to evaluate their experiences, the regular users evaluated their experiences within the range of moderately good to very good, whereas occasional users tended to underline the importance of having a personal trusted relationship with the

advertiser, and often supported this argument with accounts of their previous negative past experiences with other types of B2C mobile communication practices. For example:

Participant 11 (on the importance of dealing only with known and trusted companies): "*I once got myself into trouble when a semi-legal company sent me a "you are the lucky winner" kind of text. I would not normally believe it but I had recently participated in an O2 surprises contest so I called them back and gave them my home address. The person on the phone was rude and pushy...to put it simply, that was awful!"*

Several participants told stories about their previous negative experiences with advertisers where they felt they were manipulated into receiving m-advertisements. For example:

Participant 12 (on a previous experience with a manipulative advertiser): *I once wanted to get a loyalty card. The application didn't go through but they still felt free to use the information I had given in my application to send promotional messages to my phone and email"*

Participant 13 (on a previous experience with a free mobile horoscope service): *"They kept sending me messages about who Leo is compatible with and where to download a full astrological forecast!"*

Generally, participants tended to tell more about their negative experiences rather than the positive ones. One possible explanation could be that they wanted to warn others of the possible risks involved in dealing with m-advertisers. In contrast to participants with negative past experiences, those who reported having positive experiences tended not to share their experiences quite as vigorously. Therefore, lack of positive stories should not be interpreted as insignificance of positive histories, but rather explained by post-behavioural differences between satisfied and dissatisfied m-adverting users.

4.6 Innovativeness

As previously mentioned, non-parametric test confirmed that frequency counts significantly varied among the three groups (χ^2=151.300; df=16; p< .001). The expectation was that different levels of innovativeness (in this case actualised) would manifest themselves in different susceptibilities of non-users, occasional users and regular users to the BPM elements was generally confirmed.

Specifically, as seen in **Table** 2, compared to other groups, *non-users* mentioned aversive consequences most frequently (utilitarian punishment n=223; informational punishment n=23). They also displayed the lowest susceptibility to reinforcements among the three groups (utilitarian reinforcement n=162; informational reinforcement n=1), the lowest susceptibility to the positive social setting (n=9) and relatively low susceptibility to positive physical factors (n=131). Despite the fact that non-users mentioned positive temporal factors relatively more frequently than the other two groups (n=16), overall, their tendency to remain relatively unaffected by positive factors was still evident.

Similarly, *occasional users* displayed a tendency to have generally medium susceptibility to the effects of both the settings and the opt-in consequences. For example, they mentioned negative physical factors (n=45) less frequently than non-users (n=47), yet more frequently than regular users (n=7), thus indicating that although they are not as cautious as non-users, they may still be held back from subscribing to m-advertising by its negative features relatively more than experienced regular users. They are also slightly more influenced by positive social factors (n=10) than non-users (n=9), and yet not nearly as strongly as regular users (n=23). Their susceptibility to positive temporal factors (n=7) lies between the two extremes (n=16 non-users; n=4 regular users). Interestingly, however, this group is affected by physical factors more strongly (n=163) than the two other groups (n=131 non-users; n=105 regular users) and is just as discouraged by negative temporal factors (n=23) as the other groups (n=23 non-users; n=23 regular users). Putting these slight deviations aside, however, the general trend is that occasional users stand in the middle with most of the setting factors. With regard to opt-in consequences, this trend holds only with aversive consequences, whereas for reinforcements, occasional users demonstrate varying tendencies.

Finally, *regular users* appear to be most strongly affected by positive social factors (n=9 non-users; n=10 occasional users; n=23 regular users) and at the same time display minimal concern about negative physical factors (n=47 non-users; n=45 occasional users; n=7 regular users). Although they do not strictly follow the expected tendency in relation to other setting factors, their susceptibility to opt-in consequences falls within the expected pattern. Specifically, they mentioned utilitarian reinforcement (n=215) considerably more frequently than non-users (n=162) and only slightly less frequently than occasional users (n=224) and their susceptibility to utilitarian punishment (n=67) is the lowest among the three groups (n= 153 non-users; n=153 occasional users). As is consistent with the proposition, their susceptibility to informational consequences also seems to follow the same trend; although the frequencies for these informational factors are too low to make meaningful comparisons.

Notwithstanding several deviations, the data does however show the potential for the moderating role of innovativeness this thesis has proposed. Since participants with different levels of actualised innovativeness (i.e. relative earliness of m-advertising opt-ins) have in many instances followed the expected patterns, it can be concluded that the innovativeness variable is likely to hold the predictive potential which this thesis seeks to examine.

5. Conclusion

Project I has demonstrated that consumer opt-in choice is strongly influenced by a range of contextual factors and behaviour consequences. In summary, of all the factors, consumers can be most effectively stimulated by utilitarian reinforcements and positive physical stimuli. Correspondingly, negative utilitarian consequences and negative physical stimuli are most off-putting. Other environmental factors, except negative regulatory and negative social stimuli, also proved relatively critical. Project I has generally confirmed the viability of the proposed behavioural perspective on m-advertising opt-in choice, as well as the proposed interpretation of BPM factors provided in Chapter Two.

To summarise, physical factors that can stimulate opt-ins include: (1) informative content, (2) entertaining content, (3) good content design, (4) m-advertisement length, (5) mobile phone's capabilities, and (6) user's location. Social factors have been confirmed to include (1) personal recommendation and (2) overall popularity of m-advertising. Temporal factors include (1) timeliness and (2) leisure time.

With regard to utilitarian opt-in consequences, reinforcement factors have been categorised into: (1) usefulness benefit, (2) hedonic benefit, (3) economic rewards (including bargain benefit), (4) socialisation benefit, (5) mobility/convenience benefit, (6) benefit of improved personal effectiveness, and (7) benefit of relieving boredom. Utilitarian punishments have been confirmed to include: (1) privacy and security risk, (2) irrelevant information risk (spam), (3) negative emotions, (4) disturbance during other activities, (5) interruption of mobile phone use, and (6) time wasting.

On the whole, Project I has provided preliminary evidence that opt-in choice can be fruitfully reinterpreted within the BPM framework, thus validating the argument and substantiating the rationale for the further systematic analysis of both the identified factors and others not sufficiently addressed by focus group participants, in consequent quantitative studies.

As well as the need to address each of the BPM components systematically, another question that needs to be answered is whether these factors would jointly influence the opt-in choice. In other words, would the combined influence of behaviour setting and learning history (the concept of situation in the BPM) determine the opt-ins? Therefore, the next project should

measure the respective influences of each BPM factors and examine the influence of specific situations on the opt-in choice.

An additional venue for Project II is to address the influence of *domain-specific* innovativeness on the opt-in choice. Specifically, as Project I has confirmed the *principal* importance of the innovativeness factor to the opt-in issue, it is now necessary to move the enquiry to practical ground by investigating the *predictive* potential of the innovativeness variable. Since the actualised innovativeness does not hold a predictive potential (Goldsmith & Hofacker, 1991; Midgley & Dowling, 1978) it therefore seems logical to operationalise innovativeness on a more useful domain-specific level, commonly known to have the strongest predictive potential among its other operationalisations (Roehrich, 2004). Thus, in addition to analysing the effect of the BPM factors and the situational influences on choice, Project II should further examine the role of domain-specific innovativeness in consumers' opt-in choices.

CHAPTER FOUR

BEHAVIOURAL MODEL OF OPT-IN CHOICE

1 Introduction

With regards to the question of "*how can consumer opt-in for m-advertising be stimulated?"* the present research examines opt-in choice from a behavioural perspective, with application of the behavioural perspective model (BPM) (Foxall, 1990, 1997a). Project I documented in Chapter Three was conducted in order to validate the relevance of the research model's key four components: behaviour setting, learning history, opt-in consequences and innovativeness; and to generate items for the operationalisation of these constructs in subsequent studies. Project I has demonstrated that consumer opt-in choice has been strongly influenced by a range of contextual factors and behavioural consequences, thereby providing initial support for the predicted influences of these BPM factors on the opt-in choice and substantiating the rationale for further systematic analysis of these effects.

With regards to the innovativeness, the enquiry started with a concept of *actualised* innovativeness firstly, to obtain a general understanding of whether innovativeness in its simplest form would be a legitimate BPM component; and, secondly, to understand whether it would hold the expected moderating potential. Consistent with these expectations, the results have demonstrated that relative importance of most BPM components have varied across groups with different levels of actualised innovativeness. This has therefore indicated both the importance of the innovativeness construct for the research model and the possibility of it functioning as a moderator.

Upon the receipt of an initial confirmation of the relevance of the four key components of the models to the opt-in choice prediction, it is necessary to address each factor systematically. Therefore, Project II will aim to measure the respective effects of the BPM factors, and the innovativeness factor, in order to identify the most important choice predictors.

Additionally, whereas in Project I, innovativeness was analysed only on the *actualised* behaviour level, Project II will further explore the *predictive* power of innovativeness, which the construct of actualised innovativeness does not hold (Goldsmith & Hofacker, 1991; Midgley & Dowling, 1978). Therefore, in this Chapter, innovativeness has been operationalised at the domain-specific level, which has been considered most useful for behaviour prediction (Roehrich, 2004). Thus, in sum, the first objective of this project is the *Objective 1* of the thesis.

Most importantly, since it is now known that the BPM choice antecedents of behaviour setting and learning history can both influence the opt-in choices of consumers, the next question which arises is whether these factors can influence the opt-in choice conjointly and simultaneously, as the BPM has predicted. As will be recalled, according to the BPM, behaviour setting and learning history constantly interact and their interactive influences define the consumer situation. Therefore, this project has been set to examine the inter-relationship between the setting and leaning history through the investigation of the role of *situational* factors in the opt-in choice, thereby also contributing to *Objective 2* of the thesis.

The chapter is organised in the following manner. Firstly it briefly summarises the research propositions that are to be tested. It then describes the selected research design and documents the data collection procedures which will be undertaken. Upon reporting and analysing the study results, the chapter subsequently closes by the summarising of key findings and the drawing of implications for Project III.

2. Project Propositions

The propositions addressed in this project are graphically summarised in **Figure 12**.

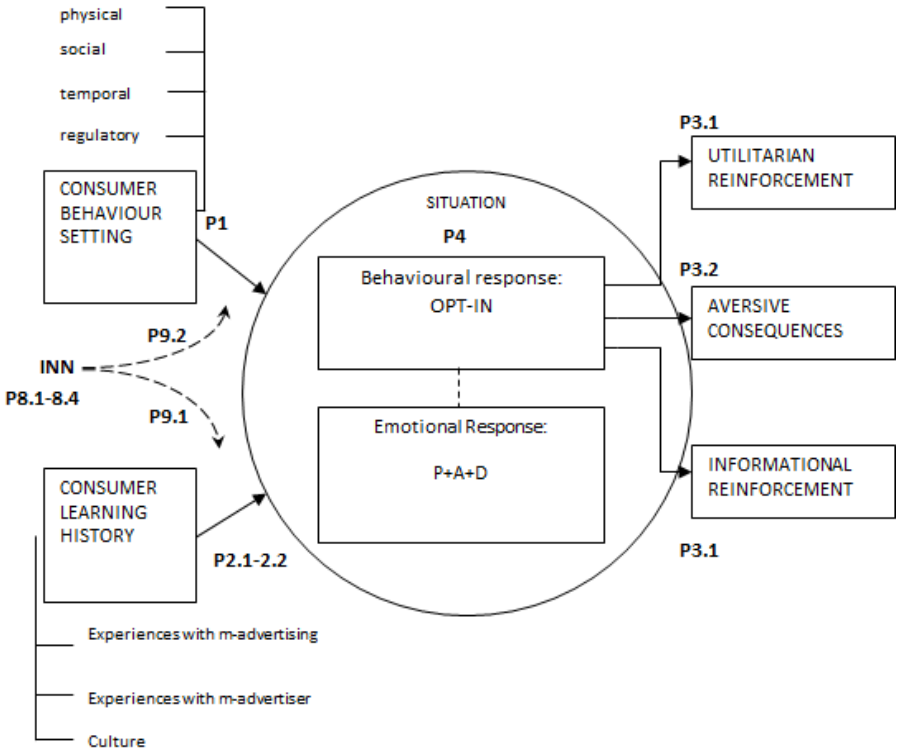


Figure 12 : *Project II Propositions*

The first three propositions addressed in **P1, P2.1,** and **P.3.1-3.2** are based on the BPM's three core components of behaviour setting, learning history and goal-directed behaviour consequences of opt-ins. Importantly, in order to avoid unnecessary complications, in Project II, the learning history construct will only be addressed in its basic form – i.e. learning history of past behaviours.

Moving on to situational influences on choice, Project II will also seek to examine the effects of behaviour setting scope on the opt-in choice (**P4**). With regards to the innovativeness as a moderating variable, this proposition will be looked at from two angles. Firstly, Project II will seek to test whether adopter groups have differing susceptibilities to different reinforcement patterns (Foxall, 1993, 1994a, 2007a) (**P8.1-8.4**). Secondly, it will additionally examine the possibility of the consumer innovativeness factor functioning in the moderating capacity (**P9.1-9.2**).

3. Research Design

3.1 Research Instrument

For the purposes of Project II the questionnaire instrument was selected. The questionnaire was deemed suitable as it enabled capturing of all variables of interest and comparative evaluation of the previously identified factors. In addition, it enabled the identification of the most critical opt-in determinants in the process. The questionnaire instrument could also conform to the idea of cause-effect relationships (Creswell, 1994, p.5). This has been considered especially important, as the objective of this project has not merely been to identify potential factors affecting consumers' opt-ins, but to measure the effects of specific BPM factors.

As a structured quantitative instrument, the questionnaire has also been considered a legitimate instrument from a radical behaviourist perspective, as behaviourism historically favoured quantitative techniques (Bailey & Bursch, 2002). Specifically, as explained in Chapter Two, radical behaviourism has viewed verbal responses as *behaviours* controlled by the same contingencies as the actual behaviour (Foxall, 1995c; Skinner, 1953, 1974, 1984). Therefore, self-report statements can be used to identify controlling conditions and gain insight into the nature of the S-R-S functional relations (Foxall, 1995c; Leek et al., 2000; Xiao, 2006; Xiao & Nicholson, 2010).

Importantly, although behaviorism has traditionally favoured more scientific instruments, such as experiments, at this stage, the use of experimentation would be premature. Since experimentation is a method which can manipulate and control variables by altering the intensity, frequency and duration (Beins, 2004, p.115); effective research design evidently requires sufficient knowledge of the basic nature and extent of the variables that are to be manipulated. Examining the construct composition and measuring relative effects of the independent variables is therefore considered a necessary step before designing an experiment.

The use of questionnaire surveys to explore the effects of various BPM components has been well-documented in the BPM studies, innovation opt-in studies and m-advertising studies. Specifically, in BPM related literature, questionnaires have been widely used to investigate the effects of learning history (Leek, Maddock et al. 2000) and situation elements (e.g. Belk, 1974; Foxall, 1997b, 1999a, 1999c; Mehrabian & Russell, 1974) on behaviour. This instrument has also been used for measuring innovativeness (e.g. Goldsmith & Hofacker, 1991; Hurt et al., 1977; Leavitt & Walton, 1975; Price & Ridgway, 1983); as well as for investigating factors which influence consumer willingness to opt-in for m-advertising (e.g. Bauer et al., 2005; Carroll et al., 2007; Hanley & Becker, 2008; Jayawardhena et al., 2009; Leek & Christodoulides, 2009; Rettie & Brum, 2001; Tsang et al., 2004; Xu, 2006-2007). These considerations, along with the practical advantages associated with the use of this instrument, such as easy administration and short data collection times (Sekaran, 2003), have thus determined the selection of the questionnaire as the research instrument for the purposes of this study.

The questionnaire was presented in an electronic format. Given that the research population (UK mobile users) was very large, it was important to increase sample representativeness by covering a broad geographical range. A common criticism of web-based surveys has been related to impossibility in the control of those involved in the completion process (Ilieva, Baron, & Healey, 2002, p.363). This was considered minimal in this case because in the UK every person owned at least one mobile phone with the total penetration rate exceeding the country population (Ahonen, 2006; Mintel, 2010). Since every UK resident would thus represent the population of interest, controlling those who completed the survey was unnecessary. Another commonly noted limitation has been related to response bias, due to the fact that computer illiterate people and those without access to the Internet could not be included into the sample (Czaja & Blair, 2005). This was in fact beneficial for this study as familiarity with technology was one of the main inclusion criteria for the sample (i.e. the target population was defined by the number of active mobile phone users).

On the positive side, online surveys have proven to be a viable method of data collection in empirical studies (Stanton, 1998) which have produced high response rates within a short time frame (Cobanoglu, Warde, & Moreo, 2001; Czaja & Blair, 2005; Denscombe, 2007; Ilieva et al., 2002). Online surveys are considered particularly useful when the geographic range of the target population is large, because the use of the Internet can minimise costs typically associated with conducting a country-wide research (Czaja & Blair, 2005). Furthermore, Malhotra and Birks (2006, p.425) also noted that the sampling of potential respondents through the Internet was most practicable in technological industries, because in these industries, Internet users represent the population of interest. As m-advertising clearly classifies as technology, the Internet format of data collection is deemed particularly suitable for this study. With this in mind, the web-based questionnaire format was selected.

3.2 Questionnaire Design

3.2.1 Opt-in Choice

The current level of m-advertising use was measured by the number of companies, if any, to whom a respondent had given permission to send mobile advertisements. Hence, the first question asked the respondents to indicate the number of companies to whose m-advertising they had subscribed. There were five multiple choices to choose from: "None", "Less than 2", "3-5", "6-10", and "More than 10".

3.2.2 Behaviour Setting

Behaviour setting items were mainly devised from the results of Project I as well as from the existing environmental psychology studies (e.g. Barker, 1968; Belk, 1974, 1975a, 1975b; Foxall, 1997a) and previous m-advertising and innovation adoption studies (see **Appendix 2A** for literature sources). Regulatory factors, however, were an exception to this process. Since relevant factors were not found in literature or focus groups, items were generated from the BPM literature (e.g. Foxall, 1997a, 1997b) and real-life evidence (Terms and Conditions of ad-funded mobile operator "Blyk"). Thus, the initial item generation for the behaviour setting was based on a deductive procedure, which had commonly been recommended for research which aimed to test theory, rather than to explore unfamiliar phenomena (Hinkin, 1998).

The initial non-purified scales for behaviour setting are summarised below:

- *Physical setting* consisted of 10 items: (1) informative content; (2) promotional price content; (3) entertaining content; (4) quality of content design; (5) advertisement

length; (6) number of m-advertisements; (7) mobile phone's technological capabilities; (8) user's home location; (9) user's work location and (10) user's in-store location.

- *Social setting* consisted of 4 items: (1) personal recommendations (2) popularity; (3) immediate social context (presence of others) and (4) immediate social context (crowding).

- *Temporal setting* consisted of 4 items: (1) leisure time; (2) timeliness; (3) possibility to select delivery times and (4) season time.

- *Regulatory setting* consisted of 4 items: (1) requirement to download software on mobile phone; (2) requirement to complete an application form; (3) requirement to sign a contract and (4) requirement to provide additional information.

The summed scores for each type of setting were used as a measure of the respondent's susceptibility to that setting. A collated score of all types of setting was used as a measure of the respondent's susceptibility to the influence of the behaviour setting in general.

3.2.3 Opt-in Consequences

Self-report statements about opt-in consequences were generated from the results of Project I, from the examples available in the BPM literature (e.g. Foxall, 1997a, 2007a; Leek et al., 2000; Xiao & Nicholson, 2010), and from relevant m-advertising and innovation adoption studies **(**literature sources in **Appendix 2B**).

The initial non-purified scales for opt-in consequences are summarised below:

- *Utilitarian reinforcements* consisted of 8 items: (1) improved personal effectiveness; (2) relieving boredom; (3) bargain; (4) economic rewards; (5) usefulness; (6) mobility/convenience benefit; (7) socialisation benefit and (8) entertaining utility (hedonic benefit).

- *Utilitarian punishments* consisted of 7 items: (1) negative emotion of disappointment; (2) interruption of mobile phone use; (3) disturbance from other activities; (4) irrelevant information (spam); (5) time wasting; (6) financial risk and (7) privacy and security risk.

- *Informational reinforcements* consisted of 3 items: (1) the image of a socially active person; (2) the image of a fashionable person; and (3) the image of a knowledgeable consumer.

- *Informational punishments c*onsisted of 3 items: (1) image of money-conscious person; (2) image of a person experiencing financial difficulties; and (3) image of a person with no other serious commitments.

The summed scores of utilitarian and informational reinforcements were used as a measure of a person's susceptibility to positive goal-directed opt-in consequences. Utilitarian and informational punishments were used as a measure of their susceptibilities to aversive consequences.

As the Likert-type scales have been considered most useful for behavioural research (Kerlinger, 1986), both behaviour setting and opt-in consequences constructs were measured along a Likert-type scale. In addition, based on the evidence that well-refined attitude gradations generate greater variance and increase data quality (Andrews, 1984); and that increasing a number of response options improves scale reliability (Alwin & Krosnick, 1991; Churchill & Peter, 1984; Lozanoa, García-Cuetob, & Muñizb, 2008; Preston & Colman, 2000; Weng, 2004), the study employed a well-refined scale with 7 answerable options. Seven has been commonly considered an optimal number of answer options for a Likert-type scale because scales with fewer response options have tended to result in relatively lower reliability. Whereas any further increases in the number of answer options either do not improve reliability or can confuse respondents, resultantly decreasing the reliabilities (Alwin & Krosnick, 1991; Givon & Shapripa, 1984; Preston & Colman, 2000). Furthermore, as labelling has proven to also increase reliability (Krosnick & Berent, 1993; Weng, 2004), all 7 response options were fully labelled from "strongly agree" to "strongly disagree".

3.2.4 Learning History

The learning history scale measured six types of past experiences: (1) direct experience with m-advertising; (2) direct experience with m-advertiser; (3) indirect experience with m-advertising; (4) indirect experience with m-advertiser; (5) media experience with m-advertising and (6) media experience with m-advertiser (the rationale for separating by type and source can be found in Chapter Two and **Appendix 2C**).

Since unlike opt-in consequences, the learning history construct in the BPM has not been bifurcated, its operationalisation required a slightly different approach from the agreement scale used for setting and consequences factors. Specifically, to capture the quality of each type of past experience (i.e. positive or negative), respondents who had relevant past experiences were asked to rate each type of experience on a 7-point scale from "very negative" to "very positive". Those who had no previous experiences of any kind with either m-advertising or m-advertisers were asked to skip the section and proceed to the next question.

Each of the six measures of quality of experiences was complemented by a respective measure of reliance on that kind of experience (rationale in Chapter Two and **Appendix 2C**). The questions relating to the degree of reliance on the six types of experiences named above were mandatory to all respondents, regardless of whether they had any actual experience or not. The reliance levels were measured along a 7-point scale. Thus, the learning history scale consisted of a total of 12 items and the summed scores of learning history items indicated the overall quality and importance of person's past experiences.

Additionally, the learning history measure was complemented by a measure of intended future adoption, in order to further demonstrate dependency of the current behaviours on past experience (Xiao, 2006).

3.2.5 Innovativeness

Innovativeness was measured by the Domain-Specific Innovativeness (DSI) scale (Goldsmith & Hofacker, 1991). This scale has proven a reliable predictor of innovation adoption in a number of studies (e.g. Citrin et al., 2000; Flynn & Goldsmith, 1993; Goldsmith et al., 1995). Although the original instrument was based on a 5-point scale, as most of other items were measured by 7point scales, the study employed a 7-point DSI scale for convenience purposes. Previous studies have confirmed 7-point agreement scales to be most reliable (Alwin & Krosnick, 1991; Givon & Shapripa, 1984; Preston & Colman, 2000). Previous use of the adjusted 7-point DSI scale had also confirmed that refining the scale does not negatively affect reliability (Citrin et al., 2000). In addition, the pilot test conducted in this study demonstrated that reliability of the adjusted scale was favourably compared to that of the original scale (Goldsmith & Hofacker, 1991).

The pilot and finalised versions of the questionnaire have been presented in **Appendices 3 and 4,** respectively. The finalised version of the questionnaire consisted of seven sections and was structured as follows. The cover page introduced the researcher, explained the purpose of the study and provided a definition and several examples of m-advertising in order to

minimise the possibility of misunderstanding by respondents. As commonly recommended, the questions have been grouped into thematic sections (Czaja & Blair, 2005). The first section collected information on current levels of m-advertising use and future use intention. In the same section, respondents who *had* previously used m-advertising were also asked to evaluate their past experiences with both m-advertising and their chosen advertiser. Those who had no such experience were asked to proceed to the next section. The second section collected information on variables related to the behavioural setting and reliance on different types of experiences. The third section consisted of the DSI scale (Goldsmith & Hofacker, 1991). The fourth and fifth sections investigated respondents' susceptibility to rewarding and punishing consequences of opt-in, respectively. In the sixth section, respondents were presented with eight scenarios and were asked to make an opt-in choice for each situation. The final section collected information about the age, gender, income and occupation of respondents which was deemed necessary for sample description purposes.

3.2.6 Situations

To examine situational influences on opt-in choices, the study employed a set of eight hypothetical situations relating to m-advertising opt-in. Respondents were asked to indicate whether or not they would opt-in for m-advertising in each of the given situations. The situations were developed based on the guidelines and examples available in previous BPM studies (c.f. Foxall, 1997b). Descriptions of situation scenarios are presented in **Table 3.**

	Open Setting	Closed Setting
ACCOMPLISHMENT	**CC1** You are doing your shopping at Harrods with someone you want to impress. Having finished your shopping, you are paying for your items at the till. The cashier offers to enrol you into their "VIP mobile citizen" programme. This includes receiving personalised offers and VIP invitations to upcoming in-store events via mobile phone.	**CC2** You and your family members are fans of Formula 1 motor racing. This year you decided to take them for a treat to attend a prestigious F1 World Grand Prix event. This includes staying in a luxury hotel for 4 nights, attending practice and qualification sessions, the Grand Prix and a cocktail after-party. On your first day there, you notice a poster announcing the option of subscribing to mobile advertisements from the event organisers. Subscription includes receiving real-time mobile alerts about ongoing offers for visitors, updates on current on-site events and special offers from the event sponsors.
PLEASURE	**CC3** You are at home on a Saturday night, watching X-Factor, as you usually do. You can vote for your favourite contestant by sending a text message to the show. By doing so, you are giving X-Factor permission to send commercial information to your mobile phone (e.g. X-Factor competitions, concerts in your area, upcoming CD releases). However, if you do not want to receive such information through your phone you can immediately unsubscribe by sending them a text messages- no strings attached.	**CC4** You are on a three hour Durham-London train journey. While on the train you have an option to use free Mobile TV that is being broadcasted to passengers. However, the access and use of this service is conditioned on your subscription to receive mobile advertisements from the train company
ACCUMULATION	**CC5** You are offered to subscribe to charity mobile advertising where your reward for receiving advertisements would go to the charity you support. The more advertisements you receive, the more money will be donated to that charity.	**CC6** You are offered to subscribe to collect air miles by subscribing to mobile advertising from KLM. The more advertisements you receive from them, the more air miles you accumulate.
MAINTENANCE	**CC7** The cashier at your local grocery store offers you an opportunity to subscribe to their mobile advertising. The advertisements will contain information about the products you regularly buy at that store.	**CC8** You use credit card and make credit repayments every month. Having switched to mobile banking, you are now managing your bills through your bank's secure mobile portal. However, the use of credit card repayment system on the portal is conditioned on you subscribing to mobile advertisements from your bank.

Table 3: Project II situations scenarios

Source: adapted from Foxall (1997b)

3.3 Reliability and Validity Test

To test the content face validity of the developed scenarios, they were submitted to an independent expert judge and a non-marketing judge. An expert judge was asked to assess the degree to which the developed scenarios reflected implied theoretical contingency categories. Upon receiving the feedback from the expert judge, necessary corrections were made and the corrected scenario questions were sent back to the expert judge for confirmatory approval. This procedure was repeated three times until an agreement (87.5%) was reached. The approved scenarios were then submitted to a consumer judge to ensure the described situations were engaging and relevant.

Item purification involved commonly recommended procedures (Churchill, 1979; Hinkin, 1998; Nunnally, 1978). The finalised questionnaire was first reviewed by three people to reveal possible errors and ambiguous phrases which could cause misunderstanding and confusion. The group of reviewers consisted of a BPM specialist, an English native speaker and an outside person, who independently judged the representativeness of the scale items and identified ambiguous and/or confusing statements. Based on the feedback received, necessary corrections and adjustments were made to improve comprehension and clarity of the questions. The next stage of the pre-test was a pilot study conducted on a small sample of 54 respondents in the North East of the UK. The purpose of the pilot study was to refine the developed scales and check their reliabilities.

To refine the final scale, inter-item correlations and item-to-total correlations were assessed. Any item in the scale that failed to achieve a correlation of at least 0.35 has been removed (Churchill & Peter, 1984). Items with low Pearson item-total correlations were eliminated from the scale if their removal increased Cronbach's alpha (Field, 2009; Pallant, 2005). This procedure allowed reduction of the number of items for several scales.

Specifically, items relating to the number of m-advertisements, the mobile phone's technological capabilities, user's home location, user's work location and user's in-store location were removed from the physical setting scale. The scale for the *physical setting* consisted of 5 items, producing a range of measurement from 5 to 35.

In the scale for the *social setting*, the item relating to the immediate social context was removed. The scale thus consisted of two items, yielding a range of measurement from 2 to 14.

For the *learning history*, items relating to indirect and media experiences have all been removed, which has resulted in the scale being reduced to 4 items: 2 items measuring the nature of direct experience; and 2 items measuring levels of reliance on direct experiences. The range of measurement for the learning history was from 4 to 28.

The scales for all other BPM constructs remained unchanged. Thus, the scales for *temporal* and *regulatory settings* each consisted of 4 items outlined earlier and produced ranges of measurements from 4 to 28. Similarly, the scales for *utilitarian reinforcements* and *utilitarian punishments* consisted of 8 and 7 items and yielded ranges of measurements from 8 to 56 and from 7 to 49, respectively. The scales for *informational reinforcements* and *punishments e*ach consisted of 3 items and yielded ranges of measurements from 3 to 21. Finally, the DSI scale had a range of measurement from 6 to 42.

As shown in **Table 4,** Cronbach's alpha coefficients were above the recommended .70 level (Hinkin, 1998)**.** Noteworthy, the coefficient alpha for the DSI scale has been consistent with previous studies (e.g. Goldsmith et al., 1998; Goldsmith & Hofacker, 1991).

Factor	**Number of items**	**Cronbach's alpha**
Physical	5	.91
Social	2	.73
Temporal	4	.78
Regulatory	4	.92
Learning History	4	.91
Utilitarian Reinforcement	8	.94
Utilitarian Punishment	7	.93
Informational Reinforcement	3	.75
Informational Punishment	3	.89
Domain-specific innovativeness	6	.90

Table 4: Purified scales

3.4 Population and Participants

The population of the study was defined as all mobile phone users residing in the UK. According to an Ofcom report, as of August 2009, the total number of mobile phone subscriptions was 76.8 million. (Mintel, 2010), which exceeded the country population. Hence, the target population of the study could be safely equated to the total UK population which was 61,792,000 in mid-2009 (Office of National Statistics 2010). Given the large size of the population, the sample size was computed by the Cochran's (1977) formula for large populations:

$$n = \frac{Z^2 * pq}{d^2}$$

Where n= sample size, Z=abscissa of the normal curve, p= expected proportion of the population, q = 1-*p* and d= desired level of precision. Taking the *p* value of 0.5, the required sample size for the present study with 5% desired precision is calculated as follows:

$$n = \frac{1{,}96^2 * 0{,}5 * 0{,}5}{0.05^2} = 384$$

An alternative method for calculating the required sample size also considered was based on the item-to-sample ratio. Using a commonly recommended ratio 1:10 (Nunnally, 1978; Schwab, 1980), the required minimum sample was computed to be 470 (47*x*10).

The final sample was composed of n=502 respondents, exceeding both the sample computed from population measure and the sample based on the 1:10 ratio, thereby satisfying the minimum requirement.

The study employed convenience sampling. The choice of convenience sample, which in this particular case consisted mainly of young people, was guided by several important considerations. Firstly, as the time frame for this study was limited, and the minimal sample size requirement was large, it was important to select a sampling technique that would allow the recruitment of the required number of respondents in a short period of time. As convenience sampling is known to be least expensive and least time consuming (Lunsford & Lunsford, 1995; Malhotra & Birks, 2006), this technique was selected.

Secondly, although it has been commonly argued that convenience samples cannot be representative of the population (Malhotra & Birks, 2006); they can nonetheless provide useful information as long as the final sample is reasonably representative of the population *of interest* (Proctor, 2005; Wilson, 2006). Given that in the m-advertising market, the population of interest consists mainly of young people (Grant & O'Donohoe, 2007; Okazaki, 2008; Peters et al., 2007) who are in general the most active users of m-services and new mobile

functions in particular (Okazaki, 2008; Peters et al., 2007); the choice of convenience sample consisting mostly of young people was considered reasonably representative of the target population.

Descriptor	Frequency	Percent	Valid Percent
Sex			
Male	253	50,4%	50,4%
Female	249	49,6%	49,6%
Prefer not to state	0	0%	0%
Total valid	**502**	**100,0%**	**100,0%**
Age			
18-24	261	52%	52%
25-34	146	29,1%	29,1%
35-44	66	13,1%	13,2%
45-54	26	5,2%	5,2%
55-64	2	0,4%	0,4%
65+	0	0%	0%
Prefer not to state	1	0,2%	-
Total valid	**501**	**100,0%**	**100,0%**
Income			
Below £10,000	122	24,3%	27,6%
£10,000 -£20,000	122	24,3%	27,6%
£20,000 -£30,000	73	14,5%	16,5%
£30,000 -£40,000	56	11,2%	12,7%
£40,000 -£50,000	28	5,6%	6,3%
£50,000 -£60,000	14	2,8%	3,2%
Above £60,000	27	5,4%	6,1%
Prefer not to state	60	12%	-
Total valid	**442**	**100,0%**	**100,0%**
Occupation			
Full-time students	288	57,4%	57,8%
Professionals	168	33,5%	33,7%
Self-employed	27	5,4%	5,4%
Manual workers	7	1,4%	1,4%
Not employed	8	1,6%	1,6%
Prefer not to state	4	0,8%	-
Total valid	**498**	**100,0%**	**100,0%**
Number of adoptions			
None	261	52,0%	52,0%
Less than 2 companies	147	29,3%	29,3%
3-5 companies	66	13,1%	13,1%
6-10 companies	23	4,6%	4,6%
More than 10 companies	5	1%	1%
Total valid	502	**100,0%**	**100,0%**

Table 5: Project II sample composition

As seen in **Table 5,** the sample consisted approximately of equal proportions of male and female proportions and 81% of young people aged 18-34, which appeared to be representative of the target population. The majority of respondents (52%) had never subscribed to m-advertising before; followed by 29.3% who had given permission to receive m-advertising to less than 2 companies; 13.1% who had subscribed to m-advertisements from 3-5 companies; 4.6% who had subscribed to m-advertisements from 6-10 companies and 1% who had subscribed to m-advertisements from more than 10 companies. Given that the industry is still new, this sample composition also appears to be reasonably representative of the current m-advertising use patterns.

3.5 Procedures

The electronic survey was distributed through a website link, which was advertised on relevant forums, in Durham alumni and college newsletters as well as the personal network of the author. The electronic format allowed customising of the questions to respondent's previous answers and made answers to the required questions compulsory, thereby minimising the possibility of missing cases. Respondents were not allowed to go back to consult and/or correct previous answers. This restriction supposedly maximised the likelihood of honest responses. To minimise dropout rates, respondents were also given a "save progress and continue later" option right next to the "close survey" button in the upper right corner. Clicking on the "save progress" button triggered a pop-out window where a respondent could enter their email addresses in order to receive a unique link to access their saved questionnaires. If they did not return to it after 3 days, an automatic reminder was sent to them. The data were subsequently collected over the period of 3 months.

4. Data Analysis and Interpretation

4.1 Factor Structure Assessment

After the standard normality tests, the collected data was subject to Principal Component Factor Analysis (PCA) and Confirmatory Factor Analysis (CFA). Specifically, PCA was used to condense the data on behaviour setting and opt-in consequences into smaller sets of factors, with the ultimate objective of identifying underlying factor structure and testing the construct validity of the scales – i.e. whether the suggested groups of factors (e.g. physical setting, informational reinforcements) were in consistence with the BPM factor structure (Hinkin, 1998,p.112).

To determine factorability of the data, the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy and the Bartlett's test of sphericity were examined. For the behaviour setting, the

Kaiser-Meyer-Olkin measure of sampling adequacy was .941, exceeding the recommended value of 0.5; and the Bartlett's Test of sphericity value was significant. Similar results were obtained in PCA of opt-in consequences, whereby the Kaiser-Meyer-Olkin measure of sampling adequacy was .970 and the Bartlett's Test of sphericity value was also significant. Hence, for both the setting and opt-in consequences the use of PCA was deemed appropriate (Field, 2009; Hair, Anderson, Tatham, & Black, 1995). PCA was performed with Varimax rotation as this type of rotation maximises the dispersion of factors and thus improves result interpretability (Field, 2009).

In the PCA of behaviour setting items, factors with Eigen values greater than 1 were extracted and a cut-off loading of .55 was used to retain only the solid factors. Initial PCA revealed the presence of two factors. However, although eigen value criterion is most widely used for determining the number of factors to be extracted, another important criterion is interpretability (Hatcher, 1994). Therefore, based on the interpretability logic, the analysis has generated the most sensible six-factor solution. Overall, the six factors explained 87.3% of variance, considerably higher than the recommended proportion of 60% (Hinkin, 1998).

- Factor one (eigenvalue= 9.408) explained 62.7% of the variance.
- Factor two (eigenvalue=1.197) explained 7.98% of the variance.
- Factor three (eigenvalue=.917) explained 6.11% of the variance.
- Factor four (eigenvalue=.603) explained 4% of the variance.
- Factor five (eigenvalue=.502) explained 3% of the variance.
- Factor six (eigenvalue=.467) explained 3% of the variance.

The six-factor solution for the setting variables is presented in **Table 6.** Factors were named on the basis of items that loaded highly on a particular factor. Thus, Factor 1 was named "Regulatory", Factor 2 "Physical" and Factors 3 and 4 "Temporal" and "Social', respectively. Generally, the factor loadings for the setting items have confirmed the BPM factor structure thus indicating high construct validity of the behaviour setting scale.

The two additional factors that emerged were "advertisement length" (initially a physical factor) and "possibility to select the delivery times" (initially a temporal factor). Although these factors were consistent with previous studies (e.g.Bamba & Barnes, 2007; Rettie & Brum, 2001), they could not be used in the model as scale measures are only considered meaningful when they contain two or more items (Churchill, 1979; Gerbing & Anderson, 1988). Therefore, the original four-factor structure was retained. However, as these two

items, originally intended as physical and temporal, have clearly proven to be separate components, in the large scale study, total values for physical and temporal settings have been adjusted accordingly. Therefore, *physical* and *temporal setting* items were reduced to 4 (new measurement range from 4 to 28) and 3 (new measurement range from 3 to 21), respectively.

Question	Items	Component					
		REG	PHY	TEM	SOC	CONT	LEN
17	Requirement complete an application form	.854					
16	Requirement to download software on mobile phone	.846					
18	Requirement to sign a fixed contract	.803					
19	Requirement to provide additional private information	.766					
7	Entertaining content		.726				
5	Informativeness of advertisement content		.721				
6	Price content		.717				
8	Quality of content design		.711				
12	Leisure time			.802			
13	Timeliness			.739			
15	Season time			.677			
11	Personal recommendation				.731		
10	Social popularity				.710		
14	User control					.953	
9^{RC}	Advertisement length						.830

Table 6: Rotated component matrix for behaviour setting;

Extraction method: PCA Rotation method: Varimax with Kaiser Normalization

In the PCA of opt-in consequences, four factors were extracted. Items with loadings below .55 were suppressed. Overall, the four factors explained 82,9% of variance, again exceeding the recommended 60% (Hinkin, 1998).

- Factor one (eigenvalue= 14.712) explained 70.0% of the variance.
- Factor two (eigenvalue=1.055) explained 5.0% of the variance.
- Factor three (eigenvalue=.903) explained 4.3% of the variance.
- Factor four (eigenvalue=.741) explained 3,5% of the variance.

The four component structure has provided support for the BPM notion of bifurcated positive and negative consequences of behaviour, thereby indicating high construct validity of the scales (**Table 7).** Therefore, Factors 1 and 2 were named "Utilitarian Reinforcements" and "Utilitarian Punishments", respectively. Factors 3 and 4 were named "Informational Reinforcements" and "Informational Punishments", respectively.

Question	Items	Component			
		UR	UP	IP	IR
31	Economic rewards	.757			
30	Bargain	.738			
32	Usefulness	.722			
34	Socialisation benefit	.683			
33	Mobility/convenience	.676			
35	Entertaining utility (hedonic benefit)	.668			
28	Improved personal effectiveness	.648			
29	Releasing boredom	.645			
39	Disappointment		.778		
40	Disturbance from other activities		.771		
41	Mobile phone usage interruption		.705		
44	Financial risk		.694		
42	Irrelevant information (spam)		.652		
45	Privacy/security risk		.626		
43	Time waste		.591		
47	Image of a person experiencing financial difficulties			.817	
46	Image of money-conscious person.			.801	
48	Image of a person who has no other serious commitments			.750	
37	Image of socially active person.				.815
38	Image of fashionable person				.772
36	Image of knowledgeable consumer				.743

Table 7: Rotated component matrix for behaviour consequences

Extraction method: PCA Rotation method: Varimax with Kaiser Normalization

The PCA was subsequently followed by Confirmatory factor Analysis (CFA), which is a stricter analysis technique used in scale development to quantitatively assess the quality of the developed factor model. It thereby can provide additional evidence of construct validity and can measure loadings of individual factors (Hinkin, 1998, p.114). The CFA is known to complement PCA because some of the often criticised features of PCA are eliminated in CFA as it requires specification of model a priori and allows assessing of the model fit (John & Soto, 2007, p.483).

Specifically, the model fit was assessed by the General Fit Index (GFI), Comparative Fit Index (CFI), incremental fit index (IFI), Root-Mean-Square Error of Approximation (RMSEA) and the Standardised Root-Mean-Square Residual (SRMR) as commonly recommended (Hair et al., 1995; Hinkin, 1998; Hu & Bentler, 1999). The CFA was carried out using AMOS software and employed the maximum likelihood method. Thus, the use of PCA and CFA prior to proposition testing allowed the assessment of the overall quality of the model by testing the underlying factor structure and construct validity of its components.

The results of CFA included all 10 independent variables that were proposed to predict opt-in choice. The results indicated that the model fitted the data reasonably well (GFI =0.91,

CFI=0.96, IFI=0.96, RMSEA=0.068, and SRMR= 0.06). Specifically, the CFI was above .90 level and both the RMSEA and SRMR were below the level of .08, recommended for an adequate fit (Browne & Cudeck, 1993; Hair et al., 1995; Hu & Bentler, 1999). The good model fit has confirmed high construct validity of the scales.

4.2 Proposition Testing-P1

4.2.1 Analysis Procedures

P1: *Behaviour setting elements will significantly influence m-advertising opt-in choice.*

The proposition was tested as follows. Firstly, a Pearson correlation test was used as a general measure of the proposed relationship between the total setting and the reported level of opt-in. This allowed determining both the direction and strength of the proposed relationship (Pallant, 2005).

Secondly, in order to perform a more detailed analysis, Pearson correlation coefficients were calculated for the relationships between the opt-in choice and each type of setting (e.g. physical, social) separately. The analysis allowed discriminating between the influences of each type of setting and provided valuable knowledge about their relative effectiveness in terms of opt-in stimulation. The high Pearson correlation coefficient (>.5) signalled high strength of the relationship between the opt-in and its proposed predictors (Pallant, 2005).

4.2.2 Results

As Table 8 shows, the correlation between behaviour setting and reported level of opt-in has proven significant (r=.799; p<.01). Since correlations above the level of .05 are considered high (Pallant, 2005), this result has confirmed a high degree of association between setting and opt-in choice.

Table 8: Pearson correlation coefficient for behaviour setting

		Behaviour setting total	Level of opt-in
Behaviour setting total	Pearson Correlation	1	.799(**)
	Sig. (2-tailed)		.000
	N	502	502
Level of opt-in	Pearson Correlation	**.799(**)**	1
	Sig. (2-tailed)	.000	
	N	502	502

With regard to the respective effects of the four individual types of settings, as shown in **Table 9,** all types of behaviour setting were significantly and strongly correlated with the opt-in choice. Among the four settings, physical setting was most strongly correlated with the dependent variable (r=.754, p<0.01); followed by regulatory setting (r=.740, p<0.01), temporal setting (r=.683, p<0.01) and social setting (r=.638, p<0.01).

Table 9: Pearson correlation coefficient for the four types of behaviour setting

		Physical setting	Social settinl	Temporal setting	Regulatory setting	Level of opt-in
Physical setting	Pearson Correlation	1	.767(**)	.788(**)	.720(**)	.754(**)
	Sig. (2-tailed)		.000	.000	.000	.000
	N	502	502	502	502	502
Social setting	Pearson Correlation	.767(**)	1	.778(**)	.648(**)	.638(**)
	Sig. (2-tailed)	.000		.000	.000	.000
	N	502	502	502	502	502
Temporal setting	Pearson Correlation	.788(**)	.778(**)	1	.677(**)	.683(**)
	Sig. (2-tailed)	.000	.000		.000	.000
	N	502	502	502	502	502
Regulatory setting	Pearson Correlation	.720(**)	.648(**)	.677(**)	1	.740(**)
	Sig. (2-tailed)	.000	.000	.000		.000
	N	502	502	502	502	502
Level of opt-in	Pearson Correlation	**.754(**)**	**.638(**)**	**.683(**)**	**.740(**)**	1
	Sig. (2-tailed)	.000	.000	.000	.000	
	N	502	502	502	502	502

4.2.3 Discussion

Based on the results of correlation analysis, **P1** is strongly supported both on the principal level and specifically in relation to each type of setting. This finding is therefore consistent with the radical behaviourist perspective and the underlying BPM (Foxall, 1990, 1997a).

In particular, among the stimulating factors, the physical setting would appear to be relatively more effective than social and temporal settings, meaning that consumers are most interested in the physical characteristics of m-advertisements, such as its *entertaining potential* (e.g. engaging and interactive content such as videos); *informative nature of the content* (e.g. practical information relevant to the user, such as map showing location of nearest favourite restaurant when the user is abroad); *promotional price content* (i.e. information about best buys and on-going promotions) and *design* (e.g. creative presentation of ideas, 3D graphics, etc). In other words, to be appealing, m-advertisements should have content that is both aesthetically and functionally appealing. Thus, retailers would benefit most from customising the content of their m-advertisements to these specific requirements. This result also

corresponds with the results of Project I, which found physical factors to be most important among other setting factors.

Regulatory aspects of setting, such as *requirements to sign a contract; fill an application form*; *provide additional details* and *download software* have closely followed physical factors in the level of importance; thus suggesting that people are highly reluctant to give extra effort to subscribe to m-advertising. In line with the initial expectation, regulatory factors function as barriers which prevent opt-ins rather than in an encouraging capacity. This finding is not surprising as people normally look for easy and quick solutions. In the view of this, imposing additional requirements on potential subscribers would be considered most definitely unwise.

The fact that temporal setting would appear to be slightly less important than physical and regulatory factors has demonstrated that people are mostly concerned about the m-advertising features directly associated with certain benefits or costs. In other words, the question of what m-advertising can provide in terms of good informative content, and what is needed to be done to subscribe, is being prioritised over less direct temporal features such a *timeliness* and *leisure time*. That is, as long as content characteristics can promise some kind of intrinsic value and opt-in procedures are acceptably easy, consumers will not be concerned about *when* they receive the offer. A plausible explanation for this may lie in the newness of this service. At this early stage of m-advertising diffusion, consumers may want to make sure that the m-advertising has something to offer; and thus other considerations regarding timeliness and behaviours of others are of secondary importance.

Finally, the fact that social factors, such as *peer influence* and *popularity of m-advertising* are the least important amongst the setting factors can be explained by the personal nature of mobile phones and individual patterns of m-service use. Although mobile phones are social devices, in the sense that they connect people, the patterns of use and the content of mobile phones are highly personal. Therefore, people may tend to rely on their own preferences rather than pay attention to the ways others use such media. Social aspects of setting, although still highly important, are the least critical amongst other setting factors.

Overall, the most important factors are related to the physical characteristics of m-advertising content. To be appealing, m-advertisements need to be informative, entertaining, well-designed and contain practical price-related information. In addition, it is critical to understand that regulatory barriers, related to sign-up complications, are likely to discourage

opt-ins. Therefore, attractive physical features are only likely to be effective in the absence of regulatory complexities.

4.3 Proposition Testing-P2.1

4.3.1 Analysis Procedures

P2.1: *Different types of past experiences comprising individual learning history will significantly influence m-advertising opt-in choice.*

Similarly to the previous test, the test of **P2.1** was based on assessment of the Pearson correlation coefficient between learning history and the reported level of opt-ins; and between current level of opt-ins and intended future opt-ins. As explained earlier, the intention measure served in a complementary capacity to further demonstrate the dependency of future behaviours on past actions.

4.3.2 Results

As **Table 10** shows, the correlation between opt-in level and learning history of past experience was very strong (r=.864, p<0.01). Since correlations above the level of .05 are considered high (Pallant, 2005), this result has confirmed a high degree of association between past experience and opt-in choice.

Table 10: Pearson correlation coefficient for learning history of past experiences

		Experience total	level of optin
Experience total	Pearson Correlation	1	.864(**)
	Sig. (2-tailed)		.000
	N	502	502
level of opt-in	Pearson Correlation	.864(**)	1
	Sig. (2-tailed)	.000	
	N	502	502

In line with this, a high correlation between reported current level of opt-in and reported planned future subscriptions also illustrated the importance of past behaviour in determining future opt-ins (r=.622, p<0.01) (**Table 11**).

Table 11: Pearson correlation coefficient for planned future opt-ins

		future opt-in intention	reported level of opt-in
Planned future opt-in	Pearson Correlation	1	.622(**)
	Sig. (2-tailed)		.000
	N	502	502
reported level of opt-in	Pearson Correlation	.622(**)	1
	Sig. (2-tailed)	.000	
	N	502	502

4.3.3 Discussion

Based on the above analysis, **P2.1** is strongly supported. The result thus validates the learning history component of the BPM and illustrates that consumer behaviours in the m-advertising sector are largely contingency-shaped, thus also confirming another founding principle of radical behaviourism. To elaborate, consumers are strongly influenced by the nature of *previous experiences with m-advertising* as a service as well as *previous experiences with m-advertisers.* If previous experiences were pleasant, the behaviour has a likelihood of reoccurrence; and whereas past experiences were mostly negative the behaviour is likely to cease.

This result indicates that rather than being an isolated behaviour, opt-in choice is a natural consequence of consumers' past choices in relation to m-advertising and m-advertisers; and it should not therefore be expected that consumers unfamiliar with either would easily opt-in. For example, if a consumer had previously subscribed to a mobile newsletter from a favourite store, when offered an opportunity to subscribe to similar service in another store they liked, they would be likely to agree based on such a previous rewarding experience with m-advertising. Similarly, if a consumer had a long history of good trustful relationships with a brand (regular buying, attending brand events, collecting loyalty points, subscribing to email newsletters, etc), they would be likely to agree to receiving m-advertisements. Therefore, in order to generate opt-ins, retailers should focus firstly, on emphasising positive features of m-advertising which they offer (i.e. use setting cues to activate positive past experiences); and secondly, should concentrate on the building of strong trustful relationships with potential subscribers.

Importantly, the *reliance* concept which was included in the measurement of the learning history of past experiences is no less important in determining consumer choice in relation to

m-advertising. People who have strongly relied on their past experiences are more likely to be affected by past histories, than those with lower degrees of reliance. For example, if a person who was previously a loyal customer has not usually generalised from past experiences, the above noted positive effect of rewarding consumption history on m-advertising opt-in may not occur. The person would treat his/her past experiences with the company in general and the behaviour towards the m-advertising as two different matters, without drawing any associative connections. Similarly, if a person has generally tended to rely on past experiences, the effect of the positive history of dealing with the brand would be strengthened, further maximising the opt-in likelihood. Although degree of reliance is certainly considered a personal construct, which is not amenable to manipulation by a firm, this result is nevertheless useful for managerial practice. Specifically, it suggests that although the nature of past experiences would determine the general likelihood of opt-in, the effectiveness of the above recommended actions to activate and build positive histories is likely to vary among consumers with different levels of reliance.

4.4 Proposition Testing-P3.1-3.2

4.4.1 Analysis Procedure

P3.1*: Positive consequences of opt-in choice will positively influence m-advertising opt-in choice.*

P3.2*: Negative consequences of opt-in choice will negatively influence m-advertising opt-in choice.*

The tests of **P3.1-P3.2** employed the same technique. Correlation coefficients with the opt-in choice were computed separately for utilitarian reinforcement, informational reinforcement, utilitarian punishment and informational punishment. These coefficients were used firstly to measure the strength of the relationships and, secondly, to test the underlying reinforcement and punishment model structure – i.e. whether positive consequences would have a positive effect on opt-in; and whether negative consequences would affect it negatively.

4.4.2 Results

As seen in **Table 12,** correlations between opt-in level and all four types of consequences were very strong (UR: $r=.762$, $p<0.01$; UP: $r= -.804$, $p<0.01$; IR: $r=.691$, $p<0.01$; IP: $r= -.682$, $p<0.01$).

Table 12: Pearson correlation coefficient for opt-in consequences

		UR	UP	IR	IP	Level of opt-in
Utilitarian reinforcement	Pearson Correlation	1	-.864(**)	.795(**)	-.763(**)	.762(**)
	Sig. (2-tailed)		.000	.000	.000	.000
	N	502	502	502	502	502
Utilitarian punishment	Pearson Correlation	-.864(**)	1	-.746(**)	.765(**)	-.804(**)
	Sig. (2-tailed)	.000		.000	.000	.000
	N	502	502	502	502	502
Informational reinforcement	Pearson Correlation	.795(**)	-.746(**)	1	-.646(**)	.691(**)
	Sig. (2-tailed)	.000	.000		.000	.000
	N	502	502	502	502	502
Informational punishment	Pearson Correlation	-.763(**)	.765(**)	-.646(**)	1	-.682(**)
	Sig. (2-tailed)	.000	.000	.000		.000
	N	502	502	502	502	502
Level of opt-in	Pearson Correlation	.762(**)	-.804(**)	.691(**)	-.682(**)	1
	Sig. (2-tailed)	.000	.000	.000	.000	
	N	502	502	502	502	502

This result has confirmed a high degree of association between opt-ins and all four types of goal-directed consequences. Importantly, consistent with the underlying theory, aversive consequences were negatively associated with opt-ins; and rewarding consequences had a positive association with it, which again serves to confirm the BPM logic.

4.4.3 Discussion

Based on the results, **P3.1-P3.2** are supported. Specifically, just as the BPM has predicted, rewarding consequences are positively associated with opt-ins and punishing consequences are associated with it negatively. The results have also demonstrated that amongst all types of consequences, utilitarian punishments are most strongly associated with opt-ins ($r = -.804$, $p<0.01$); followed by utilitarian reinforcements ($r=.762$, $p<0.01$), informational reinforcements ($r=.691$, $p<0.01$) and informational punishments ($r = -.682$, $p<0.01$).

This has therefore suggested that consumers are strongly discouraged by risks associated with the use of m-advertising, such as spam, potential financial losses, privacy and security risks, disappointments, interruption of mobile phone use, disturbance from other activities, and time wasting. Therefore, to stimulate consumer opt-ins, m-advertisers should minimise possible

associated risks by taking specific measures, For example, to reduce the risks of spam, they may need to customise the content and limit the frequency of m-advertisements. Similarly, to reduce financial risks, m-advertisements, which include additional content for which a person may be additionally charged (e.g. an Internet link if the user does not have an Internet add-on), should be avoided.

Utilitarian reinforcement is also overwhelmingly important. Specifically, in choosing whether or not to opt-in, consumers can be strongly influenced by improved personal effectiveness; the benefit of relieving boredom; product bargains; economic rewards; general usefulness of information; mobility/convenience benefits; socialisation benefits and hedonic benefits.

From this it can be concluded that retailers could increase opt-ins by including and effectively communicating these benefits to potential subscribers. Taken together with the result associated with importance of past experiences (**P2.1**), this result has suggested that rather than sending general information about a newly launched product line, it would be advisable to include information about relevant product bargains based on consumers past product preferences. In addition, to further enhance the general usefulness of information, practical information relevant to the consumer could be provided; such as directions from their current location to the nearest store. Furthermore, location-based m-advertisements, could further contribute to the benefit of improved personal effectiveness (e.g. "You are now passing a Boots store. We have recently launched an improved version of the cream for which you gave a positive review last month. It now has UV protection. Stop by to take a look!"). Additionally, by sending discount vouchers through a mobile phone, retailers could add the mobility/convenience benefit to m-advertising. By sending collective offers for certain products (e.g. 2 for 1 for coffee) they could also enhance the socialisation benefits. Finally, retailers could benefit from adding entertaining and interactive features (e.g. videos, games) to their m-advertisements as these features would increase hedonic benefits of m-advertising thereby increasing the opt-in likelihood.

The results also demonstrated that utilitarian consequences were generally more important than informational consequences, which also replicated the results of Project I. A plausible explanation for this may have been related to the fact that mobile devices are private devices and mobile content is not normally shared with others. Given that informationally maintained behaviour usually only occurs when it is visible to others (e.g. Amaldoss & Jain, 2005; Chao & Schor, 1998; de Mooij & de Mooij, 2011, p.202), consumers are unlikely to be affected by image factors in their behaviour towards m-advertising. This finding suggests that of primary concern to consumers are the associated pragmatic benefits and risks, such as economic

reward and financial risk; whereas less direct image benefits and risks are of less importance. It is therefore advised that retailers should focus on maximising and communicating the practical benefits discussed above rather than on informational benefits.

4.5 Proposition Testing-P4

4.5.1 Analysis Procedures

P4: *Situations where the behaviour setting scope is closed will be more effective in stimulating consumers' opt-in for m-advertising than situations where the behaviour setting scope is open.*

The test of **P4** was conducted as follows. Firstly, to enable meaningful comparisons, the data set was re-structured on a case basis, thus producing a total of 4016 situation cases from the sample of 502 respondents (i.e. 502 respondents x 8 situation scenarios= 4016 cases). This allowed the use of a standard independent-sample t-test which served to provide a general understanding of the differences in opt-ins between open and closed settings.

On a more specific level, each pair of open and closed situations (CC1-CC2, CC3-CC4, CC5-CC6 and CC7-CC8) was analysed separately using a one-way repeated measures ANOVA. This test allowed both a comparison of opt-in means across eight situation scenarios and testing of the overall significance of the differences in opt-ins across eight scenarios. As the analysis involved many paired comparisons, post hoc tests to minimise the possibility of Type I error, was deemed necessary to conduct a post hoc test, specifying strict criteria for significance. For the post hoc test, the Bonferroni confidence interval adjustment was used (Field, 2009).

Additionally, since according to the BPM, the situation is a meeting place of the behaviour setting and the learning history, which are posited to constantly interact activating one another, the analysis involved testing of the interactive effects of the total setting and total learning history on the opt-in choices. To conduct this test, both the setting and the learning history scores were trichotomised into "high", "medium" and "low" ranges, based on their means and standard deviations (Field, 2009). The ranges for the learning history were: 4-12 low, 13-20 medium and 21-28 high. The ranges for the setting were: 13-37 low, 38-65 medium and 66-91 high. Then, a two-way independent ANOVA was performed with the opt-in levels as the dependent variable and the ranges of setting and learning history as fixed factors.

4.5.2 Results

There was a significant difference in scores for open (*M*=.19, *SD*=.394) and closed settings [*M*=.37, *SD*=.483; *t*(3857.23)=12.85, *p*=.00]. Thus, the results have confirmed that open settings produced less opt-ins than closed settings.

The results of a **one**-way repeated measure ANOVA conducted to compare opt-ins across eight situation scenarios are presented in **Table 13**

Table 13: Mean Opt-ins across Contingency Categories (CCs)

	Mean	Std. Deviation	N
Choice in cc1	.25	.436	502
Choice in cc2	.39	.487	502
Choice in cc3	.14	.347	502
Choice in cc4	.51	.500	502
Choice in cc5	.23	.423	502
Choice in cc6	.27	.446	502
Choice in cc7	.14	.347	502
Choice in cc8	.31	.465	502

Mauchly's test indicated that the assumption of sphericity had been violated (chi-square= 270.53, p<.05), and therefore degrees of freedom were corrected using Huynh-Feldt estimates of sphericity (epsilon=0.84). The results have revealed that the opt-in scores differed significantly between scenarios, *F*(8.96, 0.20)= 44.59, p<.05. Specifically, opt-ins in closed situations were higher than those in open situations. The post hoc tests revealed that differences between open and closed settings were significant in "Accomplishment", "Pleasure" and "Maintenance" (pairs CC1-CC2, CC3-CC4 and CC7-CC8) (p<.001). However, this difference was not significant in "Accumulation" (CC5-CC6) (p>.05).

Furthermore, as seen in **Figure 13**, closed setting scenarios (2, 4, 6, 8) consistently produced more opt-ins than open setting scenarios (1, 3, 5, 7). It is also evident from the graph that just as the post hoc test has indicated, the increase in opt-ins due to situation closure is considerably less noticeable in "Accumulation" than in other situation pairs.

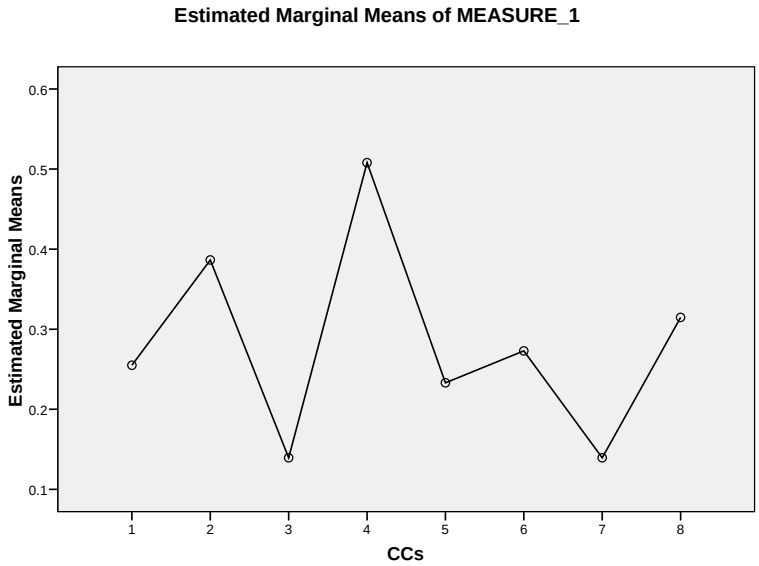


Figure 13: Mean opt-ins across contingency categories

The two-way independent ANOVA, performed to test interactive effects of behaviour setting and learning history on opt-ins, has revealed that both the setting ($F(2,3992) = 16.587, p < .001$) and learning history ($F(2,3992) = 521.734, p < .001$) had significant main effects; and that there was also a significant interaction between them ($F(3,3992) = 64.12, p < .001$). The post hoc tests have also subsequently confirmed that significant differences were present among the three ranges of scores (high, medium, low) of both the setting and the learning history.

4.5.3 Discussion

Based on the above results, **P4** is generally supported. Closed setting has proven relatively more effective in producing opt-ins than open setting. This suggests that the underlying logic behind the proposition was correct in the sense that when given many alternative options consumers are likely to refuse m-advertising; and when such options are limited or temporary unavailable the opt-in probability increases. Therefore, opt-ins can be effectively generated by presenting the subscription offer in situations characterised by closed setting condition, as in the examples of CC2, 4, 6, and 8 used in this study.

Of particular interest is the fact that setting closure has not produced a significant increase in opt-ins within the "Accumulation" operant class. A plausible explanation for this result may be found in the analysis of "Accumulation" behaviours. As will be recalled, "Accumulation" has been defined by high informational and low utilitarian reinforcements. In other words, this type of behaviour has been mainly maintained by informational rewards. Since previous

analyses (**P3.1-3.2**) have demonstrated that informational reinforcements are relatively less important in opt-in prediction than utilitarian consequences, it is logical to conclude that "Accumulation" behaviours are *principally* not appealing to most consumers, because of the lack of practical utilitarian benefit they promise. From here follows an additional conclusion that setting closure in scenarios maintained only by informational benefits are likely to be ineffective in the m-advertising context; and that the closed setting condition would only produce the desired positive effect on opt-ins if the subscription offer possessed at least some level of utilitarian reinforcement. For example, in situations where the m-advertising offer was purely utilitarian (e.g. mobile updates about new training courses available for booking), the closed setting, such as a nearing deadline for the annual professional progress report would be likely to stimulate opt-ins effectively. However, in situations when the m-advertising subscription offer did not have an inherent utilitarian benefit, as in subscription for Ferrari m-advertisements, for instance, setting closure would be unlikely to produce an increase in opt-ins, because purely informational m-advertising offers would not be attractive.

Additionally, the two-way independent ANOVA has provided empirical evidence to state that the influences of the setting and learning history BPM components on consumers' opt-ins choices were interactive, as the model has predicted. This has therefore further validated the usefulness of the situational concept in the opt-in choice prediction.

4.6 Proposition Testing-P8.1-8.4

4.6.1 Analysis Procedures

P8.1: *"Accomplishment" pattern of reinforcement will be most effective in stimulating opt-in choice among market initiators.*

P8.2: *"Pleasure" pattern of reinforcement will be most effective in stimulating opt-in choice among early imitators.*

P8.3: *"Accumulation" pattern of reinforcement will be most effective in stimulating opt-in choice among late imitators.*

P8.4: *"Maintenance" pattern of reinforcement will be most effective in stimulating opt-in choice among last adopters.*

The test of **P8.1-P8.4** required separating respondents into adopter categories. Therefore, the respondents were divided into four groups based on their summed DSI scale scores, with the cutting points being determined by the standard deviation of the final sample, as previously

accomplished in earlier studies (Goldsmith, 2001). The scores ranged from 6 to 40 (M=21.24; SD=7.84). Hence, the partitioning ranges were 6-13 for last adopters; 14-21 for late imitators; 22-29 for early imitators and 30-40 for initiators. This resulted in the sample being divided into 84 last adopters (16.7%), 204 late imitators (40.6%), 114 early imitators (22.7%) and 100 market initiators (19.9%).

The test was carried out in several ways. Firstly, for a general understanding of these relationships, a set of four two-dimensional scatter plots (one for each of the adopter groups) was used. A visual inspection of both types of reinforcements in each of the adopter groups allowed simultaneous observation of adopters' scores for both utilitarian and informational reinforcements.

Secondly, to obtain a more precise understanding of this, cross-tabulations between adopter types and each reinforcement type were conducted. To conduct cross-tabulation analysis, both total utilitarian and total informational were separated into four ranges based on standard deviations from the mean. Adopters' preferences were then analysed by comparing score frequencies across ranges of utilitarian and informational reinforcements. The resultant contingency tables allowed the researcher to investigate the relationships between adopter group and summed scores of each type of reinforcement separately; and therefore enabled an informed conclusion to be made based on both the graphical analysis and the frequency data.

Thirdly, as will be recalled, the eight situational scenarios (contingency categories) used in the questionnaire were also based on the same four operational classes of behaviour (i.e. different reinforcement patterns) and thus represented an additional way for testing **P8.1-8.4** by using the data on the respondents' *actual* choices (opt-in/reject). Therefore, to test whether opt-ins of the different groups of adopters would follow the expected pattern, the following additional actions were taken.

Firstly, the data was split by adopter categories to enable inter-group comparisons. Then a one-way between-group ANOVA, followed by a post hoc test, was performed with respondents' opt-ins in situation scenarios as the dependent variable and operant class as the independent variable. Generally, ANOVA is similar to the t-test in that it compares group mean scores on a continuous variable (Pallant, 2005). However, the use of ANOVA was preferred to the t-test because the comparisons needed to be made across more than two operant classes (Pallant, 2005).

4.6.2 Results

As can be seen in **Figure 14**, dispersion of scores for utilitarian and informational reinforcements varied across the adopter groups. Specifically, the scores of market initiators were predominantly concentrated in the upper right corner, indicating their orientation towards consequences high in both dimensions. On the other end, last adopters' scores were low on both axes, suggesting their weak orientation towards utilitarian and informational rewards. Both early and late imitators displayed medium susceptibilities to both types of reinforcements, which was visually apparent in the form of widely dispersed centrally located scores for both groups. The difference between these two middle groups, however, was the fact that while earlier imitators were greater in similarity to market initiators, in that their scores tended to be more concentrated in the upper right corner of the box, later imitators displayed much lower susceptibilities to the reinforcements and their scores were similar to those of the last adopters.

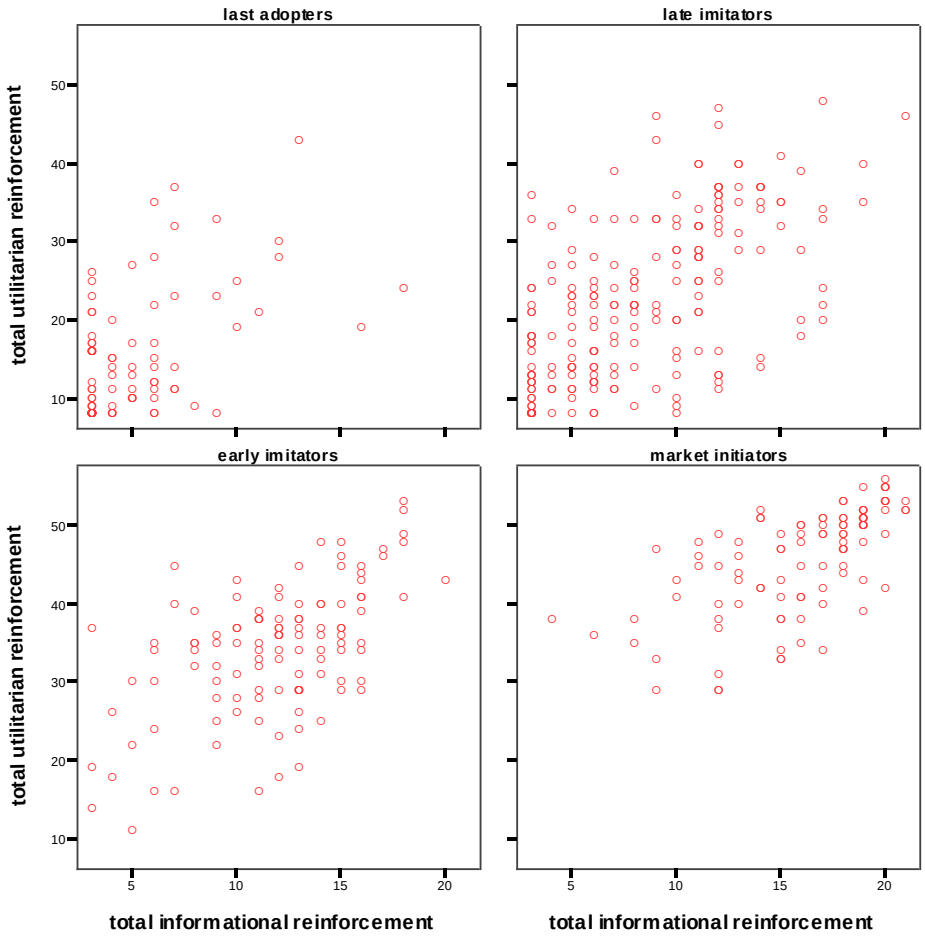


Figure 14: Dispersion of total scores of utilitarian reinforcement and informational reinforcement across adopter groups

Similar results were achieved by cross-tabulation analysis. As seen in **Table 14,** different groups of adopters had different reinforcement preferences. For convenience, the ranges with highest score frequencies for each group are shaded in grey. Whilst for initiators and last adopters the tendencies were as expected (i.e. high ranges for both UR and IR for initiators; low levels of both UR and IR for last adopters), early and late imitators deviated from the predicted pattern.

Specifically, early imitators displayed preference to relatively high levels of both utilitarian and informational reinforcements, rather than the predicted pattern of high utilitarian and low informational reinforcement. In comparison, late imitators did not appear to have a well-defined preference. Instead, their preferences covered several ranges of both reinforcement types (**Table 14**).

			Ranges of Total UR[A]					Ranges of Total IR[B]				
			8-15	16-28	29-42	43-56	**Total**	3-6	7-11	12-16	17-21	Total
Adopter group	Last adopters	Count	51	27	5	1	**84**	66	13	4	1	**84**
		Expected count	19.7	20.7	27.9	15.6	**84.0**	27.9	20.9	23.6	11.5	**84.0**
		% Within group	60.7%	32.1%	6.0%	1.2%	**100%**	78.6%	15.5%	4.8%	1.2%	**100%**
	Late imitators	Count	65	76	57	6	**204**	86	67	42	9	**204**
		Expected count	48.0	50.4	67.9	37.8	**204.0**	67.9	50.8	57.3	28.0	**204.0**
		% Within group	31.9%	37.3%	27.9%	2.9%	**100%**	42.2%	32.8%	20.6%	4.4%	**100%**
	Early imitators	Count	2	21	74	17	**114**	13	35	58	8	**114**
		Expected count	26.8	28.2	37.9	21.1	**114.0**	37.9	28.4	32.0	15.7	**114.0**
		% Within group	1.8%	18.4%	64.9%	14.9%	**100%**	7.8%	28.0%	41.1%	11.6%	**100%**
	Market initiator	Count	0	0	31	69	**100**	2	10	37	51	**100**
		Expected count	23.5	24.7	33.3	18.5	**100.0**	33.3	24.9	28.1	13.7	**100.0**
		% Within group	0	0	31.0%	69.0%	**100%**	2%	10%	37%	51%	**100%**
Total		Count	118	124	167	93	**502**	167	125	141	69	**502**
		Expected count	1180	124.0	167.0	93.0	**502.0**	167.0	125.0	141.0	69.0	**502.0**
		% Within group	100%	100%	100%	100%	**100%**	100%	100%	100%	100%	**100%**

[A] $X2 = 377.150$; df=9, p<0.001

[B] $X^2 = 292.618$; df=9, p<0.001

Table 14: Cross-tabulation of adopter categories and UR and IR ranges

For all four adopter groups, the homogeneity of variance assumption has been violated. Therefore, robust tests of equality of means were used for testing the propositions. Welch and Brown-Forsythe tests have confirmed that within each of the four groups there were significant differences in opt-ins across the four scenarios ($p<.05$). The Games-Howell post hoc test was then used to identify the reinforcement patterns that were responsible for these differences within each group.

The results of the ANOVA provided further support for the tendencies identified in the previous tests (**Figures 15a-15c**).

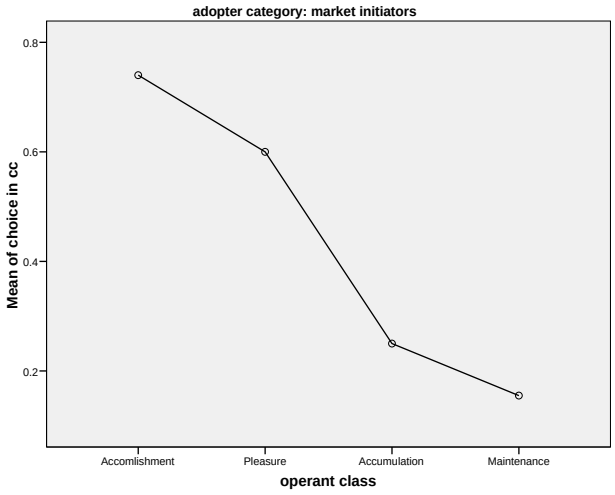


Figure 15a: Mean opt-ins of market initiators across operant classes *"Accomplishment" is significantly higher than all other operant classes*

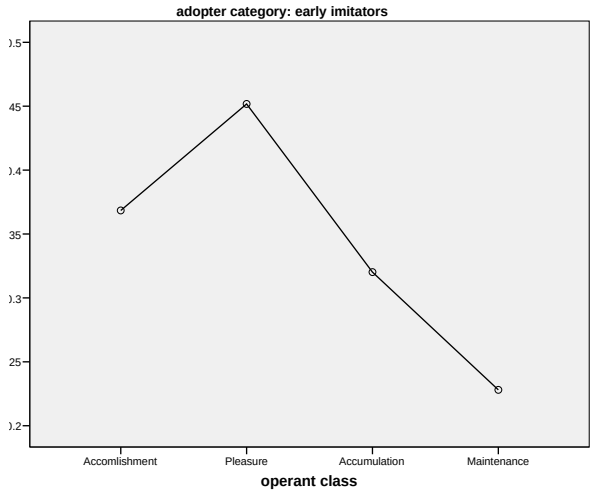


Figure 15b: Mean opt-ins of early imitators across operant classes *"Pleasure" significantly > "Accumulation" and "Maintenance" but not "Accomplishment"*

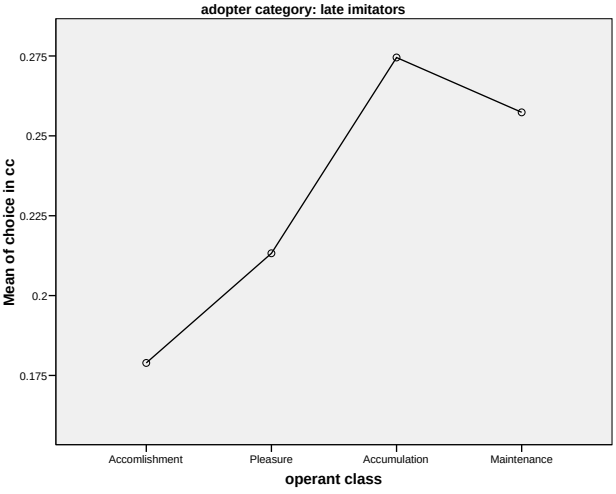


Figure 15c: Mean opt-ins of late imitators across operant classes *"Accumulation" significantly > "Accomplishment" but not "Pleasure" and "Maintenance"*

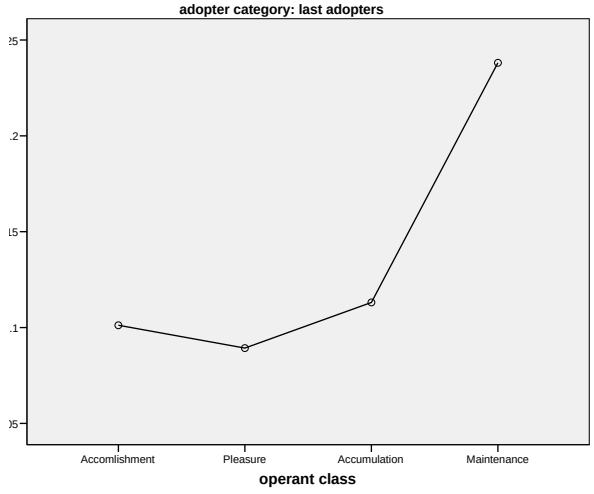


Figure 15d: Mean opt-ins of last adopters across operant classes *"Maintenance" significantly > than all other operant classes*

Specifically, post hoc tests revealed that initiators opted-in for "Accomplishment" significantly more frequently than for all other reinforcement patterns ($F(3,795)=82.29, p<0.05$); and that for last adopters, the "Maintenance" scenario was significantly preferred over the other scenarios $F(3,668)=7.03, p<0.05$).

The two middle groups, however, did not follow the expected patterns, which replicated the earlier result regarding their summed scores of reinforcements (i.e. scatter plot and cross-tabulation analyses). Specifically, for early adopters, although "Pleasure" was significantly preferred to "Accumulation" and "Maintenance" ($F(3,908)=9.07, p<0.05$), it was *not* significantly preferred to "Accomplishment". For late adopters, opt-ins in "Accumulation" were significantly higher than in "Accomplishment" ($F(3,1628)=4.32, p<0.05$), but did not significantly exceed opt-ins in "Pleasure" and "Maintenance" (**Figures 15a-15d**).

4.6.3 Discussion

Based on these results, **P8.1** and **P8.4** are strongly supported whilst **P8.2-8.3** are rejected. Both the first two tests, which compared ranges of total reinforcement scores across four groups of adopters, and the third test, which used the actual choice measure (Opt-in/Reject) from the data on the eight situation scenarios, consistently demonstrated the following sequence of events. Whist the two extreme groups of adopters (initiators and last adopters) did follow the predicted pattern, the middle groups (early and late imitators) did not have distinctive preferences and their behaviours tended to be generally similar to those of initiators and last adopters.

Interestingly, although visual examination of **Figures 15a-15d** has suggested that early imitators tended to be most susceptible to "Pleasure" and late imitators preferred "Accumulation", just as **P8.2-8.3** predicted, these differences were not always significant. For example, within the early imitators group, insignificant differences between op-ins in "Accomplishment" and "Pleasure" clearly signaled that they could behave as initiators. Similarly, for late imitators, there were no significant differences between "Accumulation", "Pleasure" and "Maintenance" scenarios, thus suggesting that this group may have behaved as both early imitators and last adopters; which again demonstrated indistinctiveness of their behaviours.

A plausible explanation for this may have been the fact that when the m-advertising is just entering the growth stage (the diffusion stage associated with early imitators), early imitators attempt to *maximise* the benefits by opting for the most reinforcing type of offer (i.e.

"Accomplishment"); and when the m-advertising starts to become commonplace and thus gradually loses its initial novelty appeal (the diffusion stage associated with late imitators), late imitators in turn try to *minimise* possible risks by choosing the basic and therefore the safest type of m-advertising service.

On this basis, it can be concluded that market initiators are likely to derive satisfaction from both the pragmatic benefits of m-advertising and from the image-associated benefits. In contrast, last adopters are not affected by these factors and would only opt-in for m-advertising when it is necessary. Therefore, at the first stage of diffusion, when the target market is represented mostly by initiators, it is advisable to focus on both the functional benefits of m-advertising (e.g. informativeness, price content, etc) and image-related benefits (e.g. image of a fashionable, socially-active and knowledgeable person). Towards the last stage of diffusion, when m-advertising is widely used by many, it would be reasonable to present m-advertising not as a useful or image-enhancing service but rather as a solution to everyday problems by integrating it into other commonly used services, such as mobile banking for instance.

In addition, since the two middle groups are most susceptible to medium levels of *both* types of reinforcements, at the middle stage of diffusion it is advisable to employ a *balanced* approach by providing medium levels of both types of benefits to potential subscribers. In addition, considering that early imitators have tended to behave as initiators and late imitators have tended to behave as last adopters, the pattern of combined reinforcements for early imitators should be higher than that for late imitators.

Hence, the general recommendation is to provide both types of reinforcements for *all* adopters at *all* diffusion stages starting from the highest levels of both reinforcement types and then decreasing the level of provided reinforcements gradually at every subsequent stage of diffusion.

4.7 Proposition Testing 9.1-9.2

4.7.1 Analysis Procedures

P9.1: *Innovativeness will moderate the influence of learning history on opt-in choice.*

P9.2: *Innovativeness will moderate the influence of behaviour setting on opt-in choice.*

Following common practice, both propositions were tested by measuring interaction effects in a hierarchical regression analysis (Aiken & West, 1991; Cohen, Cohen, West, & Aiken, 2003;

Sharma, Durand, & Gur-Arie, 1981). Prior to performing hierarchical moderated regressions all independent variable were centered to avoid multicollinearity (Aiken & West, 1991; Cohen et al., 2003; Frazier, Tix, & Barron, 2004). The regression function used for testing moderator effects is represented as:

$$\mathbf{Y = d + aX + bM + cXM + E}$$

Whereby Y is a dependent variable, X is a predictor variable and M is an expected moderator variable (Aiken & West, 1991; Cohen et al., 2003; Frazier et al., 2004). Hence, significant interactions of the expected moderator M with the main predictor (i.e. significant beta coefficient of the XM variable) were interpreted as an indication of the moderating effect.

Importantly, as according to the BPM (Foxall, 1990, 1997a), the setting and the learning history intersect and influence choice jointly, the test of **P9.1-P9.2** required additional testing of whether the proposed moderating influences of innovativeness on the setting and learning history factors *separately* would cause moderation of their *joint* influences. Therefore, the same hierarchical regression commonly used for testing moderator effects was also performed in relation to the summed effect of setting and learning history on opt-ins. Analyses of all three regressions were supplemented by a graphical procedure commonly recommended for the analysis of moderation (Aiken & West, 1991; Cohen et al., 2003).

4.7.2 Results

In all three regressions, the tolerance value exceeded the minimum cut-off point of .10 and the VIF value was less than the acceptable maximum 10, which indicated absence of multicollinearity (Hair et al., 1995; Pallant, 2005). **Tables 15-17** present results of the three moderator regressions.

Table 15: Moderator regression results for **P9.1**

Dependent variable/regression components		Experience (E)	Innovativeness (I)	E x I (interaction)	R^2
Reported opt-in level	Standardised beta	.71	.12	.23	.81
	p	.00	.00	.00	

Table 16: Moderator regression results for **P9.2**

Dependent variable/regression components		Setting (S)	Innovativeness (I)	S x I (interaction)	R^2
Reported opt-in level	Standardised beta	.56	.22	.23	.72
	p	.00	.00	.00	

Table 17: Moderator regression results for **P9.1-9.2**

Dependent variable/regression components		Setting+ Experience (S+E)	Innovativeness (I)	(S+E) x I (interaction)	R^2
Reported opt-in level	Standardised beta	.68	.12	.24	.88
	p	.00	.00	.00	

Regression analyses have revealed that innovativeness significantly moderated the independent variables to opt-in relationships. In all three cases, innovativeness also had a significant *main* effect on choice. According to the typology provided by Sharma (1981), moderators that are related to criterion variables (i.e. function as main predictors themselves) are "quasi moderators" rather than "pure" moderators. Therefore, in both cases the level of respondent innovativeness in the mobile application domain functioned as a "quasi" moderator.

To further investigate this, graphical analysis was performed (**Figures 16-18).** All constructs were trichotomised (high, medium, low) based on mean and standard deviation statistics. Whereby "high" was defined as one standard deviation above the mean, "medium" was the mean, and "low" was one standard deviation below the mean.

As evident from **Figure 16**, innovativeness significantly moderates the effect of learning history on opt-in. Under conditions of very negative past experiences, the effect of innovativeness on opt-in is negative – i.e. the higher the innovativeness, the lower the opt-in probability under very negative experience conditions. However, after a certain point, which can be interpreted as moderately negative past experiences, the innovativeness starts to have a positive effect on the relationship of experience to the opt-in. The case is the strongest under the condition of very positive experiences. The largest differences in opt-ins can be observed between adopter groups with very positive past experiences.

Figure 16: Effect of Learning History of Past Experiences on Opt-in Choice Moderated by Innovativeness Level

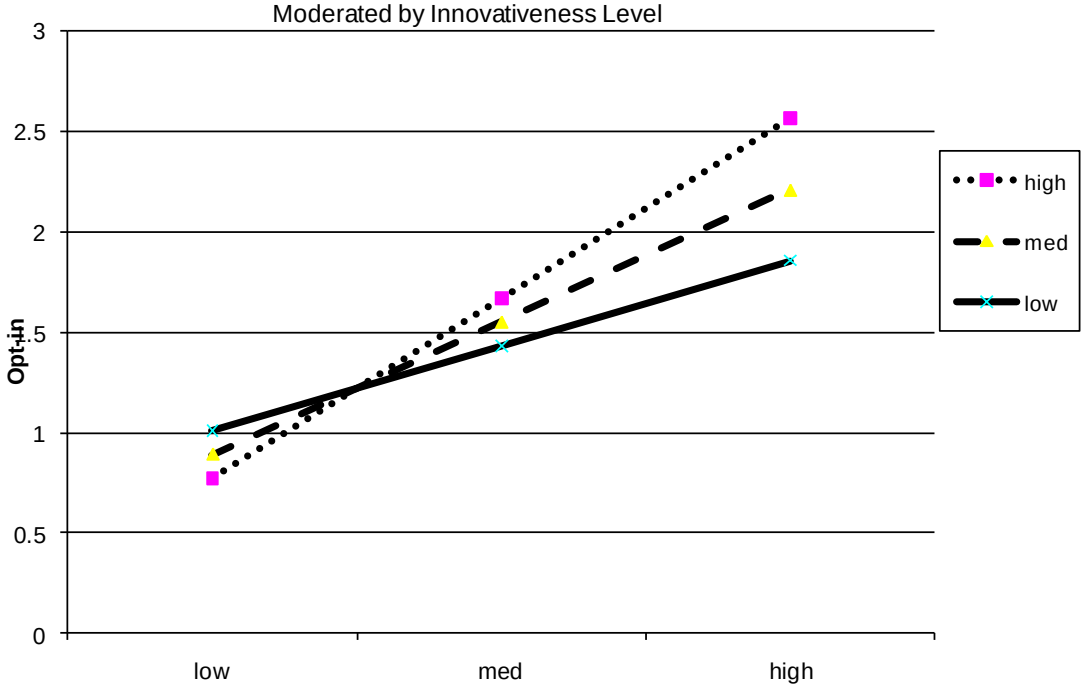
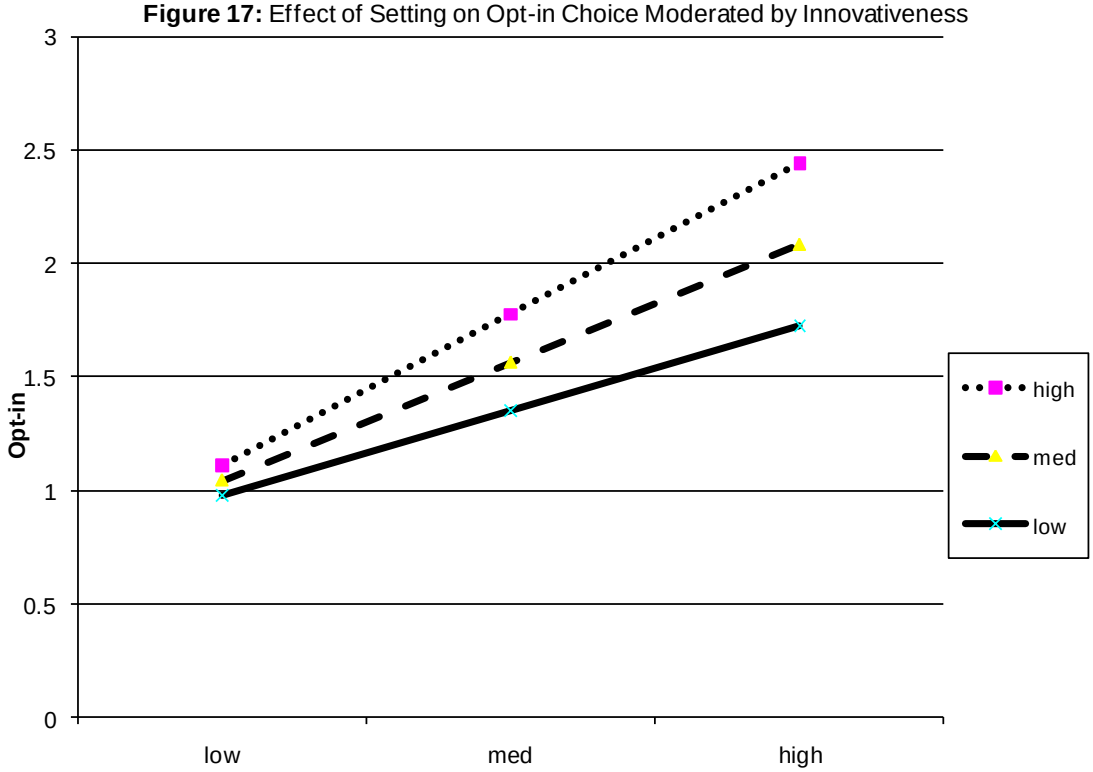


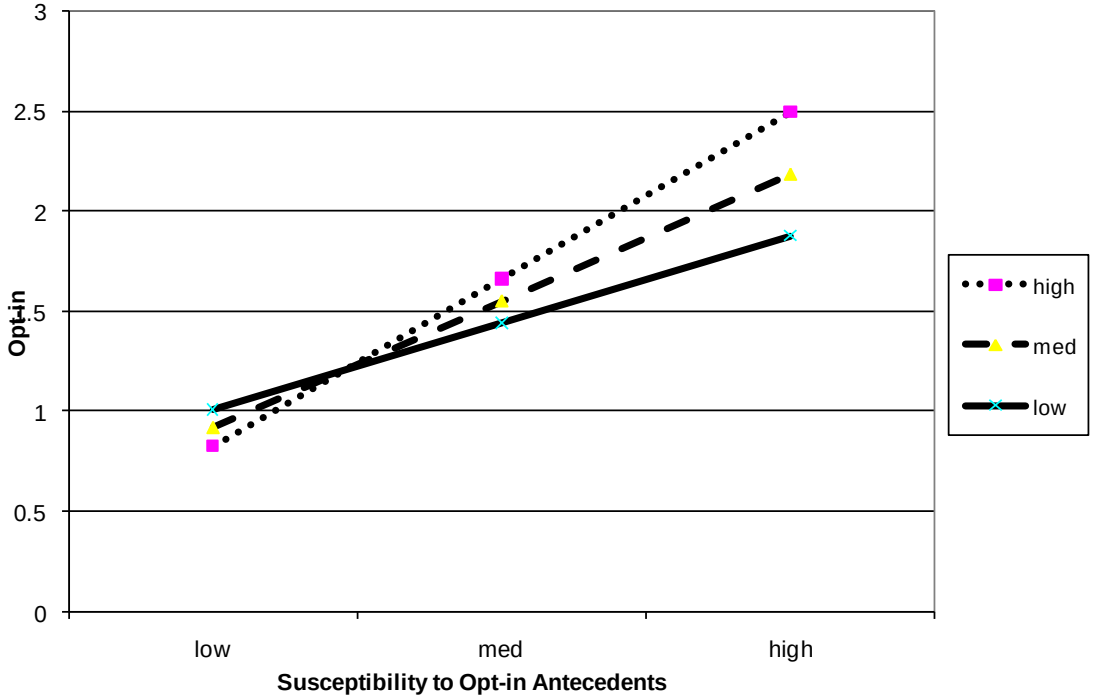
Figure 17: Effect of Setting on Opt-in Choice Moderated by Innovativeness



Next, as seen in **Figure 17**, the moderator effect can also be visually observed in the setting to opt-in relationship. Although the difference in slope steepness is not as evident as in **Figure 16,** the moderator effect is nevertheless present and amplifies the influence of the susceptibility setting on opt-ins. The case of such a positive amplifying influence is strongest for people with high susceptibility to setting; whereas those with scores very low on the setting scale are not affected by innovativeness as strongly. Under the condition of low susceptibility to setting influences, the difference in opt-ins across adopter groups is minimal.

Finally, as seen in **Figure 18** below, moderation of the *combined* influence of setting and learning history on opt-in is also graphically evident. Under the condition of very negative susceptibility to opt-in antecedents, the moderating effect is negative. In less extreme cases, innovativeness positively moderates the antecedent to the opt-in relationship. The strongest case of such positive moderation is under very high susceptibility to opt-in antecedents.

Figure 18: Effect of Opt-in Antecedents (Setting + Learning History) on Opt-in Choice Moderated by Innovativeness



4.7.3 Discussion

Based on the results of the hierarchical multiple regressions, **P9.1-9.2** are strongly supported. Specifically, innovativeness has amplified the effects of past experiences on opt-ins. In situations, where past experiences have been very negative, innovativeness has had a negative effect on opt-ins. This has indicated that less innovative consumers have tended to be more forgiving than highly innovative consumers. These switching behaviours of innovative

consumers are therefore consistent with their profiles available in the literature (e.g. Moore, 1999).

With regards to the setting, the moderating influence of innovativeness has indicated that the more innovative a person is within the specific mobile applications domain, the greater they will be influenced by the behaviour setting. Whereas less innovative consumers will be likely to have neutral reactions to the setting cues, their more innovative counterparts will react to these cues more positively, and thus will be more inclined to opt-in for m-advertising.

As for the other moderating effect of innovativeness related to the learning history, the regression analysis has revealed that innovativeness further amplifies consumer susceptibility to the effect of past experiences. Specifically, if a consumer's past experiences have been rewarding, they will have a higher likelihood of opting-in for m-advertising than other less innovative consumers. Accordingly, if the past experiences have been mostly negative, they will again react more radically and be thus more likely to turn their back on this brand than less innovative consumers. To summarise, the effects of both the behaviour setting and the learning histories are intensified by the innovativeness levels of consumers.

Moreover, both regressions have shown that domain-specific innovativeness also has a *main* effect on the opt-in, affecting it *directly*. That is, if one takes a highly innovative consumer in the m-applications domain (e.g. regularly searches new iPhone applications and knows about new m-applications available), they will be more likely to opt-in because of familiarity and a genuine interest in mobile services. This direct effect of innovativeness on behaviour has been widely known and is in direct correspondence with the innovation adoption theory (e.g. Aldás-Manzano et al., 2009; Citrin et al., 2000).

Overall, the results further demonstrate the critical importance of accounting for the innovativeness factor in opt-in prediction. Consumers' levels of innovativeness directly influence opt-on probability and also amplify their susceptibilities to both the behaviour setting and the history of past experiences.

5. Conclusion

Project II has sought to quantitatively test BPM propositions and to additionally explore the influences of the behaviour setting scope and innovativeness on m-advertising opt-in choice. The results have revealed that amongst the setting factors the most influential is the *physical setting* generally associated with m-advertising content characteristics. However, given that regulatory factors have been proven critically important, the positive effect of the physical

setting is only likely to occur when no regulatory barriers (i.e. additional requirements for opting-in) are present.

Furthermore, *utilitarian reinforcements* have been proven to be considerably more effective in stimulating opt-ins than informational reinforcements. However, considering the importance of utilitarian punishments, as in the previous case with physical and regulatory factors, utilitarian reinforcements are only likely to be effective when there are no utilitarian risks involved. Finally, consumers' *past experiences* have also been proven to play a major role in determining opt-in choices. In other words, the benefits derived from past interactions with m-advertising and/or m-advertisers are likely to reinforce future m-advertising opt-ins.

Two particularly important findings related to the implementation of the devised approach are the respective effects of the behaviour setting scope and the domain-specific innovativeness on the opt-in likelihood. Specifically, the results have demonstrated that the *closed behaviour setting condition* can effectively stimulate the opt-ins and thus can be used to further enhance the attractiveness of the m-advertising subscription offers. In addition, it has been found that the *domain-specific innovativeness* also plays an important role in predicting opt-ins. To elaborate, consumer's past practices of innovative behaviour in the m-applications domain can significantly affect their behaviour towards m-advertising both directly, by increasing the opt-in likelihood, and indirectly, by increasing their susceptibility to the BPM's choice antecedents.

Both findings have important implication for the strategy implementation: by presenting the subscription offers to consumers in the right situations and by effectively tailoring the reinforcement patterns for each specific adopter group, advertisers can significantly improve their opt-in stimulation practices. Given the undoubted importance of selecting the right tactics, the identified effects of these two factors on the opt-ins certainly require further systematic causative investigation.

Furthermore, accounting for the specificity of the advertising context, to gain a complete understanding of consumer opt-in choices, it appears critical to examine consumer emotions towards m-advertising as consumer behavioural reactions towards advertising are known to be closely associated with their emotional responses (Griskevicius et al., 2009; Pham, 2004). In further support for examining the emotions associated with opt-ins, recent BPM literature has provided evidence suggesting that the situational influences on choice and consumers' emotional reactions to environment are closely related and should thus be studied in conjunction with one another (Foxall, 1997b, 1999a; Foxall & Yani-de-Soriano, 2005;

Soriano et al., 2002; Yani-de-Soriano & Foxall, 2006). For these two reasons, it would be necessary to investigate the emotional aspect of opt-ins. To add to this, the fact that previous studies examined only a very limited scope of emotional variables (mainly emotions of irritation and emotional attachment to mobile phone) and investigated their influences in isolation from the situational context (Kolsaker & Drakatos, 2009; Merisavo et al., 2007; Mort & Drennan, 2007; Pura, 2005; Tsang et al., 2004) further substantiates the need to incorporate this variable into the analysis.

Finally, it is important to remember that besides the practical effectiveness of the devised approach, one of the most important value criterions for managerial instruments is their cross-cultural transferability (Jackson, 2002; Moisander & Valtonen, 2006). This is particularly important in the chosen application context as previous studies have underlined the need for expanding the geographical scope of cross-cultural research in both the innovation diffusion literature (Maheswaran & Shavitt, 2000, p.64) and in the mobile marketing field (Harris et al., 2005, p.212; Ngai & Gunasekaran, 2007, p.10; Varnali & Toker, 2010, p.140) specifically. Therefore, the approach for the opt-in stimulation that this thesis seeks to develop would certainly benefit from cross-cultural validation. By testing the effectiveness of the five above mentioned opt-in determinants within a new cultural context the research could further validate the findings and gain a better understanding of the opt-in behaviours.

Accounting for potential cultural variations in the effectiveness of the devised approach is especially critical in the m-advertising context, as the m-advertising business is growing in popularity on the international arena (Sharma et al., 2008). The need to take the testing of the devised approach testing across cultural borders is further reinforced by the fact that previous cross-sectional studies on m-advertising acceptance (Choi et al., 2008; Jayawardhena et al., 2009; Karjaluoto, Jayawardhena, et al., 2008; Karjaluoto, Lehto, et al., 2008; Kautonen et al., 2007; Muk, 2007a, 2007b) have covered only several countries (the USA, the UK, Taiwan, Korea, Finland, and Germany), leaving other potentially important regions uninvestigated.

CHAPTER FIVE

STIMULATING THE OPT-INS

1 Introduction

This thesis seeks to develop a behavioural account of consumer m-advertising choice, applying a Behavioural Perspective Model (BPM) (Foxall, 1990, 1997a). The first step towards uncovering the factors influencing consumers' opt-in choices was to conduct an exploratory investigation of the opt-in choice determinants. Project I has revealed that in choosing whether or not to opt-in, consumers are influenced by a wide range of environmental factors and behaviour contingencies, thereby validating the proposed behavioural explanation. In addition, Project I has identified a relationship between the *actualised* consumer innovativeness (actual past adoption of the m-advertising i.e. amount of experience at the time of the data collection) and consumer susceptibilities to the core BPM components. This has thus confirmed the principal importance of the innovativeness factor to the opt-in prediction. Most importantly, Project I has effectively fulfiled its methodological objective by generating a detailed item pool for use in Project II. Thus, overall, it has set the stage for a subsequent systematic behavioural enquiry into the opt-in phenomenon.

Based on the findings of Project I, Project II has examined each of the BPM factors as well as the innovativeness factor systematically. In particular, it has measured both the separate influences of each identified factor and the combined (or situational) influences of the BPM choice antecedents on the opt-in choice. Project II has revealed that amongst the stimulating factors, the most influential choice determinants are the *physical setting*, *consumer past experiences* and *utilitarian reinforcements*. Furthermore, given the critical importance of the *utilitarian punishments* and *regulatory barriers*, the results of Project II have also indicated that the three above mentioned opt-in stimulators would only be effective in neutral non-threatening situations where the subscription process is relatively easy.

Upon identifying the main components for a successful opt-in stimulation strategy, Project II embarked on the objective of identifying the best ways of *implementing* the devised approach. To this end, it examined two factors that could considerably enhance its implementation effectiveness. Firstly, it examined the *situational* influences on consumer choice in order to identify the most favourable conditions for presenting the m-advertising subscription offers i.e. under what conditions these techniques would be most effective? The results have uncovered that under the *closed setting condition*, consumers opted-in for m-advertising

significantly more frequently than under the open setting condition, thereby demonstrating that by presenting the offer in closed situations advertisers could effectively stimulate the opt-ins. Secondly, moving from the most obvious, but the least useful concept of "actualised" innovativeness (Goldsmith & Hofacker, 1991), it has examined the influence of consumer "*domain-specific*" innovativeness on their opt-in choice; and on their preference towards reinforcement patterns. The results have indicated that by segmenting consumers by the levels of domain-specific innovativeness, and presenting each group of adopters with a right combination of reinforcements, advertisers are able to further improve their opt-in stimulation practices.

Therefore, inspired by the findings of Project II, Project III seeks to further test the effectiveness of these two methods through testing the results in a naturalistic setting. The rationale for conducting a further investigation into these particular effects lies in the premise that unless the devised factors are not presented in the right way to the right group of consumers, advertisers will not be able to maximise opt-ins. In other words, the tactics for presenting the subscription offer and customising benefits to adopter groups have direct implications for the implementation of the proposed behavioural approach.

Furthermore, as argued in Project II, two additional variables that require special attention in Project III are consumer emotions and consumer cultural background. To elaborate, as the topic of interest in this research is advertising, it is important to account for the fact that consumer behavioural reactions towards advertising are inherently associated with emotional reactions (Griskevicius et al., 2009; Pham, 2004); and to examine the role of consumer emotions in their opt-in choice behaviours. In further support of this, the need for examining the emotional aspect of the opt-in is substantiated by previous BPM studies (Foxall, 1997b, 1999a; Foxall & Yani-de-Soriano, 2005; Soriano et al., 2002; Yani-de-Soriano & Foxall, 2006).

With regards to the cultural variable, the rationale is two-fold. Firstly, the global popularity of m-advertising raises a question about the robustness of the behavioural approach for the opt-in stimulation across cultural borders. It is therefore necessary to test cultural transferability of the devised method. Secondly, as will be recalled, this thesis interprets learning history on both the service-relevant past experience level and on a broader level which involves the experience one has absorbed from the society in which they live over a lifetime (Glenn 2004; Onkvisit and Shaw 2004, p.155). Since the cultural component of the learning history remains to be explored, the cross-cultural comparison of opt-in behaviours serves an additional purpose of testing the effect of learning history on the opt-ins choice.

To summarise, Project III addresses *Objectives 1 and 2* of this thesis by testing the identified factors and by additionally exploring the effects of emotions and culture. The chapter has been organised as follows: *Section 2* outlines the project propositions. *Section 3* describes the adopted research design and the approach to data analysis. *Section 4* documents the results of the study. *Section 5* summarises the key findings and draws conclusions.

2. Project Propositions

Project III will test the following propositions (**Figure 19**). Firstly, by conducting cross-cultural investigation it will test **P2.2** on the role of culture in consumers' opt-ins. Secondly, it will test the positive effect of the closed setting condition on opt-ins identified in Project II **(P4**). Thirdly, it will examine the relatedness of emotions to the BPM elements (**P5.1-5.3**); whether emotional responses vary across cultures (**P6**) and measure the influence of emotions on the opt-ins (**P7**). Finally, it will investigate the behavioural preferences of adopters towards reinforcement patterns (**P8.1-8.4**); and test whether affective reactions to situations differ across adopter groups (**P8.5**).

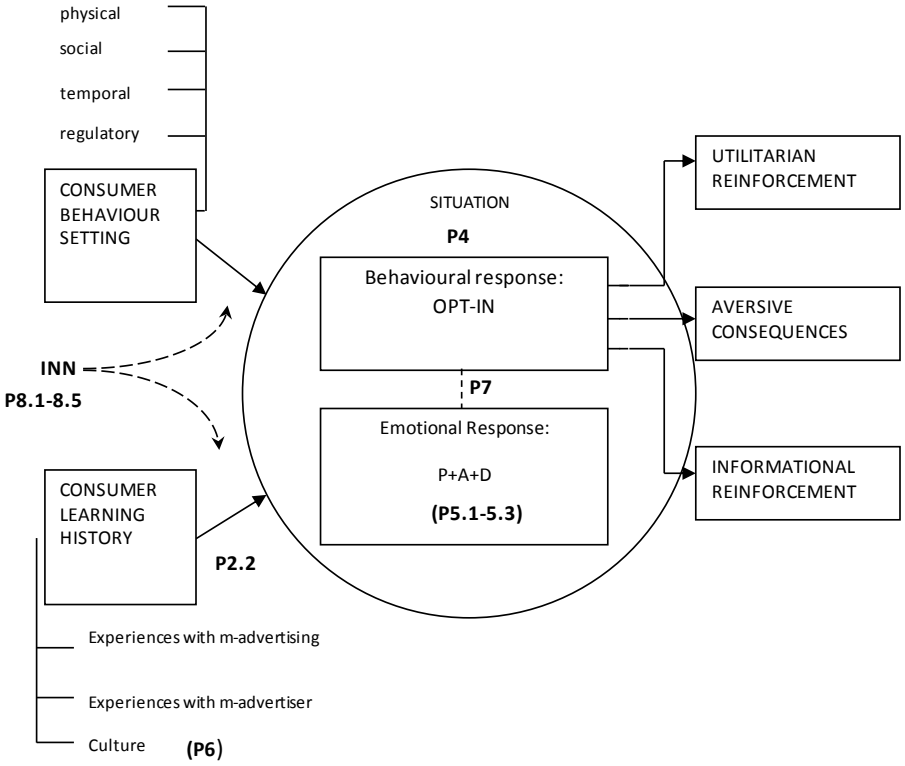


Figure *19:* *Project III Propositions*

3. Research Design

3.1 Research Instrument

Following the positivistically-inclined line of inquiry, Project III has adopted an experimental methodology which is considered the gold standard of scientific behaviour analysis (Bailey & Bursch, 2002; Beins, 2004). Experiments are commonly considered most useful for studying causal relationships for two reasons: Firstly, experiments enable the researcher to effect high control over situations in which behaviour is to occur; and secondly, they enable the researcher to manipulate independent variables in a very precise manner by specifying the experimental conditions (Christensen, 1997, p.87). Since the aim of this study has been to test the effectiveness of the devised behavioural approach for the opt-in stimulation by testing the cause-effect relationships, an experimental approach was deemed most appropriate.

Although both field and laboratory experiments are useful for this purpose, the laboratory experiment allows the institution of greater control over the experimental environment than the field experiment (Christensen, 1997). In laboratory experiments, cause and effect can be clearly separated and the effect of other potentially contaminating outside influences are minimised (Sekaran 2003, pp.144-145). This gives this method an advantage of higher internal validity over the field experiment (Beins, 2004). Therefore, Project III has adopted a laboratory experiment approach to test the respective influences of behaviour setting scope, reinforcement pattern, culture, emotions and domain-specific innovativeness on the opt-in choice behaviour.

3.2 Experimental Design

The adopted experimental design was a mixture of true and quasi-experiment commonly used in scientific research (Beins, 2004, p.184) and consisted of three levels (**Figure 20**).

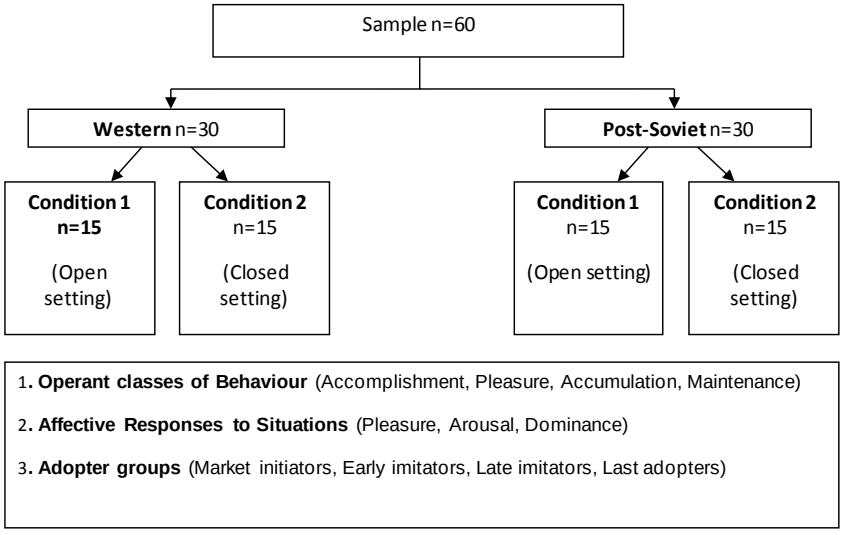


Figure 20: Project III Experimental Design

The first level involved comparison of the opt-ins between the two cultural groups (Western vs. post-Soviet). Since culture is a pre-existing "participant" variable which cannot be manipulated by the researcher, culture could not be considered a true independent variable; and thus the comparisons of the opt-in behaviours (**P2.2**) and the affective responses to situations (**P6**) between Western and post-Soviet participants were based on quasi-experimentation (Beins 2004, p.145).

At the second level, participants were assigned to one of the two setting conditions (open vs. closed). Since the setting variable was manipulated by the researcher, this test was based on a true experiment (Beins 2004).

Finally, all other propositions predominantly related to the interrelationships between these variables, such as the relationship innovativeness and reinforcement patterns (**P8.1-8.4**); innovativeness and affective responses (**P8.5**) and affective responses and operant classes of behaviour (**P5.1-5.2**), were tested on the third level of analysis.

As can be seen in **Figure 20,** Project III adopted a mixed within- and between-subjects design. The first two levels (culture and behaviour setting scope) were based on comparisons between groups and the third level employed within-group comparisons (i.e. mean PAD across four operant classes of behaviour and across four adopter groups, mean opt-ins of adopters across the four operant classes).

3.3 Stimuli Materials

A total of eight situational scenarios were designed (i.e. contingency categories). Since solid experiment requires minimising the presence of factors, other than the independent variables (Beins 2004, p.119), the open and closed situations within a single operant class (e.g. CC3 and CC4) were *identical*, with the behaviour setting scope (IV) being the *only* difference between them.

With regards to the format for situation representation, the study developed a novel methodological approach. Specifically, the situations were presented in a form of animated sound-enabled 'PowerPoint' pictures. This multisensory format for situation representation was intended to enhance realism and to maximise participants' immersion into situations.

Picture format of situation representation has been a long established practice in psychology (Morgan & Murray, 1938; Morgan, 2003; Rosenzweig, 1978) and has also been previously

used in studies on emotional responses to environments (e.g.Russell & Mehrabian, 1978) and atmospheric influences (Eroglu et al., 2003). Following the manuals for the Picture-Frustration test (Rosenzweig, 1978) and the Thematic Apperception Test (Morgan & Murray, 1938; Morgan, 2003), which are among the most frequently used projective tests, the main characters in the developed picture scenarios were mixed-gender in order to make it equally easy for both males and females to identify themselves with the portrayed character. The characters were drawn without facial features and emotions and were shown in neutral poses which allowed free interpretation of the character's emotions (Rosenzweig, 1978). In addition, following conventional methodology, the images were drawn in black and white to avoid distraction of attention; and to ensure that participants remained focused on the depicted scene; rather than on unnecessary details which did not add meaning to the situation (Morgan & Murray, 1938; Morgan, 2003; Rosenzweig, 1978).

Each animated picture portrayed a scene where a person was being offered to opt-in for m-advertising. In order to minimise the probability of refusals due to participants making an assumption that portrayed characters did not have their mobile phone with them at that moment, the main character in each picture was drawn with a mobile phone. In addition, to ensure that participants understood the nature of each situation scenario (i.e. operant class), the pictures also included cues, which hinted about the nature and circumstances of the shown situations (i.e. associated reinforcements).

The offer came in two forms: an *animated text* inserted into the picture and an embedded *audio message*. The information provided in the audio messages was generally the same as in the text animations, but contained more details on the offer conditions. This was needed to firstly, "frame" the offer into the setting of the respective situation (e.g. greeting and closing question); and secondly, to clarify the details that could have been misunderstood from the animated text messages.

The situations were designed based on the guidelines and examples available in existing BPM literature (e.g. Foxall, 1997b, 1999a; Foxall & Greenley, 1999; Xiao, 2006; Xiao & Nicholson, 2010). The presentations can be found in **Appendix 5** (CD). Detailed situation descriptions are shown in **Tables 18a-18d.**

ACCOMPLISHMENT (High Utilitarian and High Informational Reinforcement) ***Setting:*** *Luxury hotel reception* **Justification:** To qualify as an "Accomplishment" setting, the hotel interior was designed suggest prestige and superior quality entertainment/relaxation spot. The presence of the lady, observing the interaction from behind the main character's back also signalled that the situation depicted is highly social (i.e. the gentleman is being observed).	
Open Setting	**Closed Setting**
CC1 **<u>Introductory slide description:</u>** Mr. Emerson and his wife are checking in to a luxury hotel. They are staying there for a Christmas break. He is greeted by the hotel receptionist. **<u>Picture:</u>** The scene was taking place around Christmas time. The setting contained a Christmas tree and Christmas song playing on the background. **<u>Visual stimuli:</u>** *Animated text on reception desk*: "Stay updated on our upcoming events. Sign up for mobile event notification service." **<u>Audio stimuli:</u>** *Receptionist*: "Welcome to Imperia Plaza. We hope you enjoy your Christmas celebration at our hotel. After the Christmas period we will also be offering other magnificent events at our hotel. If you are interested in attending we will be pleased to sign you up for our mobile event notification service. Would you like me to sign you up for this service? "	**CC2** **<u>Introductory slide description:</u>** Mr. Emerson with his colleague is checking in to a luxury hotel. He will be attending a "Global Social Networking" conference which starts tomorrow morning. He is greeted by the hotel receptionist. **<u>Picture:</u>** Formal hotel reception. Colleague was shown wearing a conference name badge to communicate professional nature of the situation. Background conference noise added. **<u>Visual stimuli:</u>** *Animated text on reception desk*: "Do not miss out on additional networking opportunities. Sign up to receive live mobile notifications about private discussions with speakers and book your place immediately". **<u>Audio stimuli:</u>** *Receptionist:* "Welcome to the conference. We hope you enjoy your stay at our hotel, Sir. We will be offering a lot of supplementary events during the conference. During the breaks we will set up private round-table discussions in our champagne networking bar, where you can talk to the conference speakers who interest you and network with other delegates. The places are limited so you will need to book in advance. If you want to be the first to know when the bookings for these sessions are open, you can simply subscribe to our mobile notification service. Also, in future, if other similar business events are hosted by our hotel we will promptly notify you"

Table 18a: "Accomplishment**"** situation scenarios descriptions

PLEASURE (High Utilitarian and Low Informational Reinforcement)

***Setting: Mobile broadband on a** train*

Justification: The Internet was selected to represent the Pleasure-oriented class of behaviour because it is generally used for both hedonic (e.g. browsing, communicating, video streaming) and purely utilitarian (e.g. email, shopping, banking, etc.) purposes. To further increase the perceived utilitarian value of the offer, by emphasising the relevance of the reward to the occasion, it was specified that the journey was business related. Additionally, the train setting was intended as a measure for making the utilitarian benefits of the offer clear to subjects. As the "Pleasure" type of behaviour is not characterised by particularly high informational reinforcement, the man was pictured travelling alone.

CC3	**CC4**
Introductory slide description	**Introductory slide description:**
Joseph is taking a business trip. He is travelling from Durham to London by train. The train announcement is on.	Joseph is taking a business trip. He is travelling from Durham to London by train. The train announcement is on.
Picture: Wi-Fi spot signs on windows to show that free Internet is available on the train. Other passengers actively using laptops.	**Picture:** No Wi-Fi signs. Nobody is using the Internet on the train.
Visual stimuli:	**Visual stimuli:**
Scrolling LED announcement: Need faster Internet? Free fast uninterrupted broadband now available (Conditions apply)"	*Scrolling LED announcement:* "Need the Internet? Free fast uninterrupted broadband now available (Conditions apply)"
Audio stimuli:	**Audio stimuli:**
Announcement: "Welcome on board Orange Crossings services. The Cloud Wi-Fi Connection is available on this train. However, for those of you who wish to use a faster and uninterrupted broadband we also offer free conditional access to our mobile broadband. Passengers who sign up to receive occasional promotional information from us will receive free access to fast uninterrupted broadband on all Orange Crossings services. If you wish to sign up please contact any member of our staff."	*Announcement*: "Welcome on board Orange Crossings services. Wi-Fi connection unavailable on this train. However, if you wish to use the Internet we do offer free conditional access to our mobile broadband. Passengers who sign up to receive occasional promotional information from us will receive free access to fast uninterrupted broadband on all Orange Crossings services. If you wish to sign up please contact any member of our staff."

Table 18b: "Pleasure" situation scenarios descriptions

ACCUMULATION (Low Utilitarian and High Informational Reinforcement)	
Setting: Grocery shopping **Justification:** Collection of loyalty points possesses informational rewards of being a frequent and valued customer and thus satisfies the defining condition of the "Accumulation" type of behaviour.	
CC5 **Introductory slide description:** Helen, accompanied by her boyfriend, is doing her weekly grocery shopping. She is paying for her purchases. The lady cashier speaks to her. **Picture:** Supermarket till with a hanging TV screen. Accompanying boyfriend (Informational reinforcement) **Visual stimuli:** *Screen advert:* "Have a product you are passionate about? Register for mobile newsletters. Receive updates about your favourite products to your mobile phone" **Audio stimuli:** *Cashier*: "You are buying good quality wines today. Have you registered for our interest-based mobile newsletters? We can send you customised information about your favourite products through your mobile phone. If you like wines we can send you information about new wines available in our collection as well as suggestions on what wines would go best with the food you usually buy. Would you like me to sign you for this service?	**CC6** **Introductory slide description:** Helen, accompanied by her boyfriend, is doing her weekly grocery shopping. She is paying for her purchases. The lady cashier speaks to her. **Picture:** Supermarket till with a hanging TV screen. Accompanying boyfriend (Informational reinforcement) **Visual stimuli:** *Screen advert:* "Have a product you are passionate about? Register for mobile newsletters. Receive updates about your favourite products to your mobile phone and get double loyalty points" **Audio stimuli:** *Cashier:* "You are buying good quality wines today. Have you registered for our interest-based mobile newsletters? We can send you customised information about your favourite products through your mobile phone. If you like wines we can send you information about new wines available in our collection as well as suggestions on what wines would go best with the food you usually buy. You will also get double loyalty points on each shopping occasion. Would you like me to sign you for this service?"

Table 18c: "Accumulation" situation scenarios descriptions

MAINTENANCE (Low Utilitarian and Low Informational Reinforcement)	
Setting: Mobile banking user reads a letter from her bank **Justification:** Daily budget management is not ranked highly in either utilitarian or informational benefits.	
CC7 **Introductory slide description:** Ms White regularly transfers money to pay off her credit card debt. She is reading a letter from her bank's Customer Service Managing Director, Mr. Douglas. **Picture:** The picture was divided into two parts. On the left half a woman was portrayed reading a letter at home. The right half showed a blank letter with slowly appearing text. **Visual stimuli:** Text: "You are currently using our mobile banking service with inclusive text balance statements, budget warnings and text alerts whenever your card is used abroad. We are currently working on bringing even more mobile banking features to our service. To carry on making the most of mobile banking you can subscribe to receive notifications to your mobile phone whenever a new mobile banking feature becomes available. If you wish to subscribe to receive regular service updates, please sign up for this service on our website." **Audio stimuli:** The letter was read aloud by the sender and the words were synchronised to appear on a blank letter sheet as they were pronounced	**CC8** **Introductory slide description:** Ms White regularly transfers money to pay off her credit card debt. She is reading a letter from her bank's Customer Service Managing Director, Mr. Douglas. **Picture:** The picture was divided into two parts. On the left half a woman was portrayed reading a letter at home. The right half showed a blank letter with slowly appearing text. **Visual stimuli:** *Text:* "You are currently using our mobile banking service with inclusive text balance statements, budget warnings and text alerts whenever your card is used abroad. We are pleased to inform you that our mobile banking facilities now have the same features as our online banking – you can access your balance, pay bills and transfer funds securely via an encrypted password-protected mobile channel. Please note that as your credit card introductory rate of 0% has expired, you will now be charged the standard rate of interest on purchases and balance transfers. However, we can extend the 0% introductory period for you for another 9 months if you sign up to receive occasional news and promotions from us through your mobile phone. To carry on benefiting from mobile banking free of charge please sign up for this service on our website." **Audio stimuli:** The letter was read aloud by the sender and the words were synchronised to appear on a blank letter sheet as they were pronounced

Table 18d: "Maintenance" situation scenarios descriptions

3.4 Response Sheet

The response sheet (**Appendix 6**) consisted of three sections. In the first section, the participants evaluated their emotions and made a choice as to whether or not they would opt-in for m-advertising in that situation. The second and third sections consisted of the DSI scale (Goldsmith and Hofacker 1991) and demographic questions, respectively.

The dependent variable, opt-in choice, was measured using a binary format (Yes/No). The binary scale was preferred to the continuous scale in Project III because at this stage rather than measuring the likelihood of the opt-in, it was important to get a definite answer of whether or not the devised approach would work.

Affective responses were measured with the Pleasure-Arousal-Dominance (PAD) scale (Mehrabian and Russell 1974). This scale was selected for two reasons. Firstly, the PAD has numerously proven to be a comprehensive measure of human affective reactions to the environment (Foxall, 1997b, 1997c; Foxall & Greenley, 1998, 1999, 2000; Havlena & Holbrook, 1986; Mehrabian & Russell, 1974; Yani-de-Soriano & Foxall, 2002; Yani-de-Soriano, Foxall, & Pearson, 2002). Secondly, the PAD (Mehrabian and Russell 1974) dimensions were directly relevant to the BPM setting scope and reinforcements (c.f. Foxall, 1997b). For each PAD dimension, the responses were coded from 1 to 9, with 1 representing the most unpleasant, least arousing situations with minimal level of dominance; and 9 representing the most pleasant situations with maximal levels of arousal and dominance. Hence, a total score for each of the PAD dimensions ranged from 9 to 54.

The final section of the answer consisted of the DSI scale and questions about their sex and age. Just like in the Project II, the DSI instrument was a seven-point Likert-type scale, ranging from "strongly agree" to "strongly disagree" producing a range of scores between 6 and 42.

3.5 Instrument Translation

Due to unavailability of translated PAD and DSI scales in the Russian language, Russian language versions for both instruments were developed. In line with the well-established methods of cross-cultural translations (Brislin, 1970, 1976, 1986; Brislin, Lonner, & Thorndike, 1973), both scales were translated using the back-translation technique.

The translation process consisted of four stages. Firstly, two translators fluent in both languages and with a good knowledge of both Western and post-Soviet cultures independently translated the scales. The second stage involved discussions and consequent selection of the most suitable item translations from the three initial versions. In the third stage, two other translators were asked to provide back-translations for the Russian versions of both scales (Brislin, 1970, 1986; Brislin et al., 1973). The final stage of the translation process involved testing the finalised scales on a small sample of Russian speakers.

In the PAD scale, out of the 36 items, 10 items required language adaptations (final version and explanations of required adaptations in **Appendices 7-8**). In the DSI scale, no significant language or cultural adjustments were required, except minor changes to the sentence structure necessary to make them natural (final version in **Appendices 7-8**). As Behling and Law (2000) explained, where the target instrument deals with behaviours (e.g. the DSI) as

opposed to less tangible constructs (i.e. feelings, opinions) (e.g. PAD), the semantic, construct and cultural equivalence of the translations is relative easy to achieve.

The back-translations have confirmed the validities of the translated instruments. In the PAD scale, except for the words that were changed intentionally to ensure semantic and construct equivalence, the two back-translations did not differ significantly from the original scale. Similarly, back translations for the DSI scale were also not significantly different from the original. Hence, the translated versions of both instruments were confirmed as valid. The results of the reliability test are reported in the next section and in the main data analysis section.

3.6 Reliability and Validity Tests

3.6.1 Situation Scenarios

The designed scenarios were subjected to a series of reviews and evaluations by an independent BPM expert. Based on these reviews, they were adjusted several times until a general agreement of 87.5% was reached. Hence, the instrument has been confirmed as valid.

To test reliability of the instrument, a pilot test was administered on 10 Durham University students and staff. The participants had different cultural backgrounds and were randomly assigned to behaviour setting conditions. Five participants were presented with the open setting situations; whilst the other five participants were given closed situation scenarios**.**

The following tests were conducted to test the instrument reliability. Firstly, an independent-sample t-test with Dominance scores as dependent and the setting scope as an independent variable was conducted to check whether the open and closed situation scenarios adequately represented the behaviour setting scope. There were significant differences in Dominance scores between the group under the open setting condition (M=40.45 SD=3.90) and the group under the closed setting condition (M=27.70 SD=7.74; $t(28.063)=6.58$, $p=.00$), indicating validity of the setting scope representation. Then the ANOVA procedure was performed for Pleasure and Arousal to test whether the patterns of Pleasure and Arousal varied across the four operational classes of behaviour varied in the manner predicted by previous BPM studies (e.g. Foxall, 1997b). These tests have shown that there were statistically significant differences in both Pleasure $F(3, 36)=17.41$, $p=.00$] and Arousal $F(3, 36)=3.46$, $p=.026$] scores amongst the operant classes. Thus the instrument has been confirmed as reliable and valid.

3.6.2 Translated Scales

The translated PAD and DSI scales were distributed to a sample of 6 people whose first language was Russian. Participants were asked to complete the scales and inform the researcher of any particular problems or misunderstandings they had with the answer forms. As the purpose of this test was testing the scales rather than participants' reactions to any particular stimuli, for the PAD scale, they were not given any stimuli, but instead asked to use the scale to describe their emotional state at that time.

Participants did not experience difficulties with the completion of the DSI scale and no further adjustments were required. The pilot test of the PAD scale, however, revealed several problems. In completing the PAD scale, the participants reported that the translated version of the word "awed" seemed inappropriate to them because the Russian equivalent of the word "awed" had a stronger meaning and implied that the speaker felt inferior to the object of admiration. For this reason, the participants felt uncomfortable using such a word. Although during the translation process, the difference between the English and Russian connotations of this word were considered insignificant, in practice, it became clear that for this particular word semantic equivalence had not been achieved. Therefore, the pair "Important-Awed" was changed to "Important-Insignificant" without altering the word meaning.

The above described procedures indicated high validity of the translated instrument. Since the sample used for the pre-tests of both the original (n=10) and translated (n=6) scales was very small, reliability could not be assessed at that stage and has therefore been reported in the analysis of the main study.

3.7 Research Context and Location

The data for both post-Soviet consumers (various ethnicities) and Western consumers (various ethnicities) were collected in Kazakhstan. Although it is possible to argue that since Western people living in Kazakhstan may have adapted to the local culture, consequently becoming more similar to Kazakhstanis, the difference between local people and outsiders, regardless of the length of residence period, will still be apparent. This is because, as previously argued, cultural assimilation is a *generational* process whereby several generations need to pass for outsiders in order to become true representatives of their new country of residence (Montero, 1981).

Kazakhstan is a vast and ethnically diverse country with a population of 16.47 million and more than 131 ethnicities (Census, 2011). As a multi-ethnic country, Kazakhstan is

particularly suitable for this research because it can enable comparison to be made between post-Soviet and Western cultural clusters to a full extent; rather than the comparison of one particular ethnicity from the post-Soviet region against the entire span of Western ethnicities. In addition, considering the fact that m-advertising is a global trend, a multiethnic sample composition was also advantageous for this study. Importantly, however, the highest proportion of Kazakhstanis are represented by people from post-Soviet states (mostly Kazakhs and Russians), which makes it possible to classify the culture as post-Soviet (i.e. homogeneous) rather than merely multi-ethnic.

Besides being representative of the post-Soviet cultural cluster, Kazakhstan was also selected for this study for economic and market-specific reasons. In particular, as a developing country, Kazakhstan is considered to be an emerging market for m-advertising. It is also noteworthy that existing cross-cultural research (Choi et al., 2008; Jayawardhena et al., 2009; Karjaluoto, Jayawardhena, et al., 2008; Karjaluoto, Lehto, et al., 2008; Kautonen et al., 2007; Muk, 2007a, 2007b) has only investigated consumer behaviours toward m-advertising in developed nations (Germany, UK, Taiwan, Korea, US, Finland). Therefore there is a lack of information about consumer opt-in behaviours in the developing countries.

In addition, market-specific differences between common Western and Kazakhstani conditions make it particularly sensible to investigate behaviours of Kazakhstanis. Specifically, unlike the Western mobile phone market, the Kazakhstani market is based purely on the pay-as-you-go model. Consumers do not sign fixed-term contracts with mobile providers and thus are never tied-in to the service suppliers. Without such contract restrictions and being particularly fashion-conscious (Low and Freeman 2007), Kazakhstanis frequently upgrade their mobile phones, in an attempt to stay up to date with latest innovations in the industry. In the view of this market-specific characteristic, it is logical to expect this within the m-advertising sector also. Kazakhstanis would therefore be considered to behave innovatively and opt-in more eagerly than their Western counterparts.

The data was collected in Almaty, the former capital of Kazakhstan and currently its largest city which still has the status as a cultural and commercial centre. The experiment locations varied but shared key characteristics. Experiments involving Western participants were conducted on their company premises as this option was considered most convenient for participants and well-equipped for research purposes. Experiments involving local Kazakhstani people were conducted in a rented office equipped with the necessary technology. In both cases, rooms were spacious and quiet with enough space for computer equipment. The level of light in the rooms was kept to a minimum to reduce the possibility of various outside

distractions (e.g. other participants, window outlooks) and to maximise participants' immersion into the virtual situations.

3.8 Participants

The sample consisted of Kazakhstani residents of various ethnicities (post-Soviet culture) all fluent in the Russian language; and people from Western countries (Western culture) with different ethnic backgrounds all of whom were fluent English speakers. The group composition in both samples was varied to ensure better representativeness of each group. The local Kazakhstani sample included people of Kazakh, Russian, Ukrainian, and Armenian ethnic groups. The Western sample mainly consisted of British people, but also included the Dutch and Americans. The sample composition can be seen in **Table 19**. Generally, the sex and age proportions of the sample were deemed reasonably representative of the Kazakhstani population (Census, 2011).

Descriptor	**Frequency**	**Percent**	**Valid Percent**
Sex			
Male	39	65,0%	65,0%
Female	21	35,0%	35,0%
Prefer not to state	60	**100,0%**	**100,0%**
Total		**100,0%**	**100,0%**
Cultural background			
Western	30	50,0%	50,0%
Kazakhstani	30	50,0%	50,0%
Total	**60**	**100,0%**	**100,0%**
Age			
18-24	4	6,7%	6,9%
25-34	16	26,7%	27,6%
35-44	23	38,3%	39,7%
45-54	12	20,0%	20,7%
55-64	2	3,3%	3,4%
65+	1	1,7%	1,7%
Prefer not to state	2	3.3%	
Total	**60**	**100,0%**	**100,0%**

Table 19: Project III Sample composition

As convenience sampling is least expensive and least time consuming (Lunsford & Lunsford, 1995; Malhotra & Birks, 2006), a convenience sampling method was used. Importantly, in experiments in particular, where the purpose is to test the relationship, rather than to measure it, convenience samples are commonly used (Beins 2004, p.104). The logic is that after the relationship has been reliably identified (i.e. in Project II in this research), the predictions will come true regardless of which sample is selected by the researcher (Beins 2004, p.104).

Participants were recruited through the personal and professional networks of the researcher. The Kazakhstani participants (n=30) were locals who resided in Almaty. The Western participants (n=30) were mainly ex-patriots working in Kazakhstan. Although relatively small, this number of participants (n=60) has been considered appropriate for experimental studies where the sample sizes are normally small (e.g. Bailey & Bursch, 2002; Clement, 2007; Greene, Bailey, & Barber, 1981).

Following common recommendations (Beins, 2004; Davis & Bremner, 2006), in order to lower the possibility of result differences due to differences in the sample composition, the participants were assigned to the open and closed setting conditions randomly. In addition, to minimise the "participant effect" (i.e. participants' awareness of the purpose of the experiment which can negatively affect the reliability of the findings), Project III employed a "blind study" commonly recommended as a solution for this problem (Beins 2004). Participants did not know the group to which they had been assigned and thus could not infer what treatment they had received.

3.9 Procedure

The experiment was conducted in a computer laboratory with small participant groups of 3-5 people. Participants were asked to view the slides and to complete the response sheet after watching each of the four situations. The order of scenarios (operant classes) was not randomised as the possibility of carry-over effect was low. This procedure yielded a total of 240 situation cases (responses of 60 participants to 4 situation scenarios).

In order to minimise any possible misunderstanding of the instructions, prior to starting the experiment, participants were given a few minutes to familiarise themselves with the answer form, to try out the scales in the answer form and to ask questions, if they had any. Also, as it was important to isolate the participants from the outside influences in order to maximise their immersion in the situations, all participants were asked to use earphones for the entire duration of the experiment. This measure was also intended to give them a chance to go

through the situations at their own pace, and, in case of mishearing or misunderstandings, to listen to audio stimuli more than once without disturbing others. Participants completed the experiment within 15-20 minutes.

4. Data Analysis and Interpretation

4.1 Proposition Testing-P2.2

4.1.1 Analysis procedures

P2.2: *M-advertising opt-in choices would differ between Western and post-Soviet consumers.*

To test **P2.2,** a series of tests were performed. Firstly, the opt-ins were compared between the two groups using an independent-sample t-test with opt-ins as a dependent variable and culture as an independent variable. The frequencies of opt-ins in each group were then compared across operant classes of behaviour, using contingency table analysis. Finally, the data was split by operant classes and the t-test was performed separately in each operant class.

4.1.2 Results

The t-test has shown that there were no significant differences in opt-ins between Western (M=.38, SD=4.88) and post-Soviet (M=.30, SD=4.60; $t(238)=1.36$, $p=.08$) groups.

As can be seen in **Table 20**, out of 120 possible opt-ins for each cultural group (30 people and 4 scenarios), total opt-ins were 46 (38.3%) amongst Western participants and 36 (30.0%) amongst post-Soviet participants.

Table 20: Opt-ins by culture across operant classes of behaviour

	Western (n=120; 30 views for each operant class)	Post –Soviet (n=120; 30 views for each operant class)
Accomplishment	13	11
% of subjects opted-in	43.3%	36.7%
Pleasure	12	6
% of subjects opted-in	40.0%	20.0%
Accumulation	5	11
% of subjects opted-in	16.7%	36.7%
Maintenance	16	8
% of subjects opted-in	53.3%	26.7%
Total	46	36
% of subjects opted-in	38.3%	30.0%

Consistent with the observations, the t-tests in the "Accomplishment", "Pleasure" and "Accumulation" scenarios have shown that the difference in the levels of opt-ins were non-significant between the two groups. However, in the "Maintenance" scenario, there was a significant difference between Western (M=.35, SD=.507) and post-Soviet (M=.27, SD=.45; $t(58)=2.15$, $p<.05$) groups.

4.1.3 Discussion

Disconfirmation of the differences in opt-ins between the two groups in most of the operant classes has resulted in **P2.2** being rejected. A plausible explanation for the relative unpopularity of the "Maintenance" scenario among Kazakhstani participants (i.e. the only difference between the two groups that was statistically significant) may lie in the historical past of Kazakhstani consumers. As credit cards were not available to consumers in the Soviet era, people may not be used to using them and therefore are not attracted by the credit offers used in the "Maintenance" situation scenario. In contrast, Western consumers have long been accustomed to using credit cards and therefore may have found the offer appealing.

Another interesting difference was found in the preferences of the two groups. As can be seen in **Table 20**, Kazakhstani subjects tended to opt-in for the m-advertising more in scenarios with high levels of informational reinforcement ("Accomplishment" and "Accumulation); and Western subjects preferred scenarios with either high levels of utilitarian reinforcements ("Accomplishment" and "Pleasure") or low levels of both types of reinforcements ("Maintenance"). An explanation for this may again lie in the historical past of the two cultural groups. Specifically, since the Soviet system promoted equality, demonstrable status-signalling behaviours were not usually welcomed. Therefore, after the collapse of the Soviet Union consumers may have started to feel a greater need for symbolic expressive behaviours. In support of this argument, recent investigation into the buying behaviours of Kazakhstani consumers has reported that consumers are now becoming strongly oriented toward status and self-expression consumption (Low & Freeman, 2007).

Based on these results, it has been concluded that although personal past experiences certainly should be considered as important, as the previous projects have demonstrated, the cultural element of consumer learning history is *not* relevant to the choice prediction in the m-advertising context. A plausible explanation is that the use of relatively new services, such as m-advertising, does not fall into the category of culture sensitive behaviours. Since the behaviour is new, cultural norms regulating this type of behaviour may not yet have been developed. In line with this, similar results have been reported for consumer behaviour towards on-line shopping (Javenpaa & Tractinsky, 1999; Javenpaa, Tractinsky, & Vitale,

2000). This finding has therefore indicated high cross-cultural transferability of the designed approach, meaning that the techniques used in this study are likely to effectively stimulate opt-ins across cultural borders.

4.2 Proposition Testing-P4

4.2.1 Analysis procedures

P4: *Situations where the behaviour setting scope is closed will be more effective in stimulating consumers' opt-in for m-advertising than situations where the behaviour setting scope is open.*

To test this proposition, an independent-samples t-test was conducted to compare mean opt-in scores between open and closed settings.

4.2.2 Results

Opt-ins were more frequent under the closed setting condition (M=.47) than the open setting condition (M=.22). The t-test confirmed that there was a significant difference in opt-in scores for open (M= .22, SD=.414) and closed (M=.47, SD=.501; $t(238)$, p=.000) setting scenarios. The effect size was moderate (eta squared=.07).

4.2.3 Discussion

Based on these results, **P4** has been supported. As predicted, the closed setting produced more opt-ins than the open setting, which was also consistent with the results of Project II. Therefore, to stimulate opt-ins, more attention should be paid to presenting the subscription offer in relatively closed situations.

An example of a closed situation with a closed setting condition may be unavailability of alternative means of getting the offered benefit (e.g. scenario with mobile broadband offered on a train). Other examples may include situations where consumers can avoid certain losses by subscribing to m-advertising (e.g. scenarios with mobile banking). Generally, the closed setting has been found to naturally lead consumers to opt-in and can thus be deemed an effective instrument for opt-in stimulation.

4.3 Proposition Testing-P5.1-5.3

4.3.1 Analysis procedures

P5.1*: Pleasure will discriminate between Accomplishment-Accumulation and Pleasure-Maintenance.*

P5.2: *Arousal will discriminate between Accomplishment-Pleasure and Accumulation-Maintenance*
P5.3: *Dominance will discriminate between Open and Closed consumer behaviour settings*

Prior to conducting a test of these propositions, the scales, both original and translated, were assessed for reliability.

To test **P5.1-5.3**, one-way within-groups, ANOVA, followed by a post hoc test, were performed. ANOVA was necessary because the test involved cross-comparison of more than two groups (eight contingency categories). As cross-comparisons could result in a Type 1 error, the post-hoc test was used to minimise this probability (Field 2009).

The analysis was performed as follows. As will be recalled, the above propositions were based on the expectation that Pleasure was related to Utilitarian reinforcement (and therefore could discriminate between operant classes with high and low levels of utilitarian reinforcements) (**P5.1**); and that Arousal was related to Informational reinforcements (and therefore could discriminate between operant classes with high and low levels of informational reinforcements) (**P5.2**). The "Dominance" proposition **P5.3** stemmed from the expectation that Dominance was related to the behaviour setting scope (and therefore could discriminate between open and closed settings).

Therefore, to test **P5.1,** the contingency categories (CCs) representing operant classes characterised by high utilitarian reinforcement (CC1-CC4) were compared with CCs representing operant classes characterised by low utilitarian reinforcement (CC5-CC8). If the Pleasure level in each of the CC1-CC4 were significantly higher than that in CC5-CC8, **P5.1** could be supported. Therefore, the expected pattern of differences between Pleasure scores across CCs was as follows:

- **P5.1 (Pleasure):** CC1-4 > CC5-8.

P5.2-5.3 were tested following the same logic. The expected patterns were as follows:

- **P5.2 (Arousal):** CC1,2 5,6 > CC2,4,7,8.
- **P5.3 (Dominance):** CC1,3,5,7>CC2,4,6,8.

For all tests, the comparisons of the respective pairs of CCs were performed using post hoc tests.

4.3.2 Results

In the original scale, Cronbach's alpha coefficients were .89 for Pleasure, .91 for Arousal and .93 for Dominance. In the translated version, Cronbach's alpha coefficients were .89 for Pleasure, .89 for Arousal and .91 for Dominance. All coefficients were above the recommended level of .70 (Nunnally, 1978), indicating high reliabilities of both the original and translated PAD scales.

Mean scores for each of the PAD scale components across contingency categories are presented in **Table 21**. The scores appeared comparable to those observed in previous BPM studies involving PAD (e.g. Foxall, 1997b).

Table 21: Mean PAD across contingency categories with standard deviations

Contingency category/Mean PAD	Pleasure	Arousal	Dominance
CC1	36.77 (6.372)	29.40 (4.889)	42.83 (4.829)
CC2	33.97 (5.863)	35.20 (6.965)	26.47 (6.323)
CC3	35.60 (5.494)	24.93 (7.114)	35.07 (6.400)
CC4	35.87 (7.882)	27.23 (8.982)	26.10 (6.609)
CC5	31.83 (3.152)	32.07 (4.386)	41.10 (6.161)
CC6	36.57 (6.595)	31.03 (8.680)	31.87 (6.312)
CC7	30.87 (6.902)	26.03 (8.015)	40.23 (6.730)
CC8	34.60 (5.593)	29.03 (7.946)	31.97 (9.072)

In ANOVA, as assumption on homogeneity of variance was violated, and therefore Welch and Brown-Forsythe tests were used. There were significant differences in Pleasure, ($F(7,232)=3.79, p<0.05$), Arousal ($F(7,232)=6.41, p<0.05$), and Dominance ($F(7,232)=28.59, p<0.05$) across the eight contingency categories. However, contrary to **P5.1-5.2**, the Games-Howell test showed that the differences between Pleasure and Arousal scores considerably deviated from the predicted pattern. In contrast, the differences in Dominance scores between open and closed settings were generally consistent with the proposition, with only two cases (CC3-CC6; and CC3-CC8) being the exception (**Tables 22a-22c**).

Table 22a: Pleasure across contingency categories

Expected differences **(CC1-4 > CC5-8)**	Results
CC1 > CC5	SIGNIFICANT
CC1 > CC6	nonsignificant
CC1 > CC7	SIGNIFICANT
CC1 > CC8	nonsignificant
CC2> CC5	nonsignificant
CC2> CC6	Observed insignificant difference CC6>CC2
CC2> CC7	nonsignificant
CC2> CC8	Observed insignificant difference CC8>CC2
CC3> CC5	SIGNIFICANT
CC3> CC6	Observed insignificant difference CC6>CC3
CC3> CC7	nonsignificant
CC3> CC8	nonsignificant
CC4> CC5	nonsignificant
CC4> CC6	Observed insignificant difference CC6>CC4
CC4> CC7	nonsignificant
CC4> CC8	nonsignificant

Table 22b:Arousal across contingency categories

Expected differences **(CC1,2,5,6 > CC3,4,7,8)**	Results
CC1 > CC3	nonsignificant
CC1 > CC4	nonsignificant
CC1 > CC7	nonsignificant
CC1 > CC8	nonsignificant
CC2> CC3	SIGNIFICANT
CC2> CC4	SIGNIFICANT
CC2> CC7	SIGNIFICANT
CC2> CC8	SIGNIFICANT
CC5> CC3	SIGNIFICANT
CC5> CC4	nonsignificant
CC5> CC7	SIGNIFICANT
CC5> CC8	nonsignificant
CC6> CC3	nonsignificant
CC6> CC4	nonsignificant
CC6> CC7	nonsignificant
CC6> CC8	nonsignificant

Table 22c: Dominance across contingency categories

Expected differences (**CC1,3,5,7 > CC2,4,6,8)**	Results
CC1 > CC2	SIGNIFICANT
CC1 > CC4	SIGNIFICANT
CC1 > CC6	SIGNIFICANT
CC1 > CC8	SIGNIFICANT
CC3> CC2	SIGNIFICANT
CC3> CC4	SIGNIFICANT
CC3> CC6	nonsignificant
CC3> CC8	nonsignificant
CC5> CC2	SIGNIFICANT
CC5> CC4	SIGNIFICANT
CC5> CC6	SIGNIFICANT
CC5> CC8	SIGNIFICANT
CC7> CC2	SIGNIFICANT
CC7> CC4	SIGNIFICANT
CC7> CC6	SIGNIFICANT
CC7> CC8	SIGNIFICANT

4.3.3 Discussion

Contrary to previous studies (Foxall 1997b, 1997c; Foxall and Greenley 1999; Yani-de-Soriano, Foxall et al. 2002), multiple comparisons of Pleasure and Arousal scores have shown that in the chosen context these two constructs were not related to utilitarian and informational reinforcements. Hence, **P5.1-5.2** has been rejected. The Dominance proposition, however, received considerable support, with only one exception (CC3-CC6 and CC3-CC8). Therefore, **P5.3** has been generally supported.

These results suggested that the levels of Pleasure and Arousal were *not* associated with utilitarian and informational reinforcements and therefore did not discriminate between respective operant classes. Consumer emotions are therefore not related to benefits but are independent reactions to the environment. With regards to the Dominance, the proposed relationship *does* seem to exist, meaning that consumers feel more in control when the setting is open (e.g. when mobile broadband is already available and subscription to m-advertising can only provide *improved* service); and less in control when the setting is closed (e.g. when the Internet access is conditional on opt-in).

4.4 Proposition Testing-P6

4.4.1 Analysis procedures

P6: *Cultural background of consumers will not significantly affect their Pleasure, Arousal and Dominance affective responses to m-advertising.*

To test **P6**, a series of independent-sample t-tests were conducted with the PAD elements as dependent variables and cultural background as independent variables. Since there were only two cultural groups ANOVA was not considered necessary.

4.4.2 Results

As seen in **Table 23**, the differences in PAD scores between Western and post-Soviet people were found to be very small.

Table 23: Mean PAD scores by culture

	sample	N	Mean	Std. Deviation	Std. Error Mean
Pleasure	Western	120	34.23	6.311	.576
	Post-Soviet	120	34.79	6.432	.587
Arousal	Western	120	30.23	7.620	.696
	Post-Soviet	120	28.50	8.013	.731
Dominance	Western	120	33.27	8.651	.790
	Post-Soviet	120	35.64	9.094	.830

The t-test has shown that there were no significant differences in Pleasure scores between Western (M=34.23, SD=6.31) and post-Soviet (M=34.79, SD=6.43; t(237.913)=-.69,p=.49) samples. Similarly, there were no significant differences in Arousal scores between Western (M=30.23, SD=7.62) and post-Soviet (M=28.50, SD=8.013; t(237.401)=1.72,p=.09) groups. However, for Dominance scores, there was a significant difference between Western (M=33.27, SD=8.65) and post-Soviet (M=35.64, SD=9.09; t(237.408)=-2.073,p=.04) groups. The magnitude of this effect was, however, small (eta squared=.02).

4.4.3 Discussion

As evident from the above findings, culture does not affect levels of felt Pleasure and Arousal. With regards to Dominance, although culture significantly influences levels of felt Dominance; the difference between Western and post-Soviet consumers and the magnitude of this effect have been found to be very small, suggesting that these differences are not very

important. It could have been the case, for example, that post-Soviet consumers tended to feel more in control *generally;* rather than in relation to the specific situations presented. Therefore, **P6** which stated that affective reactions to situations are universal has been generally supported.

4.5 Proposition Testing-P7

4.5.1 Analysis procedures

P7: *Affective responses to situations will significantly affect m-advertising opt-in choice*

To test **P7**, data was split by operant class and Pearson correlation coefficients were assessed in order to understand the strength of association between emotions and opt-ins.

A common recommendation is to use one-tailed t-tests when the direction of the relationship can be predicted; and rely on two-tailed statistics when no assumption about its direction can be made a priori (Field 2009). Although it was possible to predict the effect of Pleasure and Arousal on choice from previous research, the literature has presented conflicting findings on the influence of Dominance on behaviour with some studies reporting a positive relationship (Foxall 1997b, 1997c; Foxall and Greenley 1999); and some reporting that approach behaviours are higher in submissiveness-eliciting situations than in dominance-eliciting situations (Russell and Mehrabian 1978). Therefore, as recommended for such situations (Field 2009), a two-tailed test of significance was used. The resultant correlation matrices were also assessed for collinearity.

4.5.2 Results

Pleasure and Arousal were strongly and significantly correlated with opt-ins in all situation scenarios, indicating a strong degree of association between Pleasure and Arousal and opt-in choice. Whereas correlations of opt-in choice with Pleasure and Arousal were positive and significant in all cases; Dominance was negatively associated with opt-ins and the significance of association was unstable (**Tables 24a-24d**). Although several correlations between predictors were relatively high, the tolerance value for PAD dimensions exceeded the cut-off point of .10 and the VIF value was less than 10, indicating an absence of multi-collinearity (Hair et al., 1995; Pallant, 2005).

Table 24a: Scenario 1: (Accomplishment) Pearson Correlation Matrix

	1	2	3	4
1 Pleasure	-			
2 Arousal	.547**	-		
3 Dominance	.123	-.421**	-	
4 Opt-in	.667**	.717**	-.340	-

** correlation significant at the 0.01 level (2-tailed)

Table 24b: Scenario 2 (Pleasure): Pearson Correlation Matrix

	1	2	3	4
1 Pleasure	-			
2 Arousal	.773**	-		
3 Dominance	-.157	-.184	-	
4 Opt-in	.543**	.703**	-.296*	-

** correlation significant at the 0.01 level (2-tailed)

* correlation significant at the 0.05 level (2-tailed)

Table 24c: Scenario 3: (Accumulation) Pearson Correlation Matrix

	1	2	3	4
1 Pleasure	-			
2 Arousal	.620**	-		
3 Dominance	-.363**	-.119	-	
4 Opt-in	.846**	.768**	-.328*	-

** correlation significant at the 0.01 level (2-tailed)

* correlation significant at the 0.05 level (2-tailed)

Table 24d: Scenario 4 (Maintenance): Pearson Correlation Matrix

	1	2	3	4
1 Pleasure	-			
2 Arousal	.765**	-		
3 Dominance	-.054	-.146	-	
4 Opt-in	.804**	.840**	-.120	-

** correlation significant at the 0.01 level (2-tailed)

* correlation significant at the 0.05 level (2-tailed)

4.5.3 Discussion

Based on these results, **P7** was **supported.** Pleasure and Arousal positively and strongly influence opt-ins, which is consistent with the previous literature whereby these two constructs have also been found to influence approach behaviours across a wide range of settings, including store settings (Baker et al., 1992; Donovan & Rossiter, 1982; Donovan et al., 1994; Li et al., 2009; Sherman & Mathur, 1997), restaurant settings (Ryu & Jang, 2008) and advertising settings (Olney, Holbrook, & Batra, 1991).

As far as the Dominance is concerned, whilst in previous studies (Foxall, 1997b, 1997c; Foxall & Greenley, 1999) it was significantly and positively correlated with approach behaviours, the results of Project III have revealed negative correlations in all cases, with unstable significance levels, suggesting that most participants did indeed prefer a closed setting condition. The result therefore supports an earlier finding by Russell and Mehrabian (1978) whereby people tended to approach submissiveness-eliciting situations more often than Dominance-eliciting situations.

As argued in Chapter Two, since m-advertising does not inherently appeal to consumers, people are more likely to avoid subscribing to it unless absolutely necessary. Therefore, the closed setting which limits the scope of available alternative choices (i.e. avoidance) is likely to produce more opt-in than the open setting where avoidance possibilities are readily available. Since it has now been confirmed that the closed setting is more effective in stimulating opt-ins than the open setting, and that the Dominance emotion is closely associated with the behaviour setting scope, the above finding is not surprising and only serves to further demonstrate the effectiveness of setting closure.

4.6 Proposition Testing-P.8.1-8.5

4.6.1 Analysis procedures

P8.1: *"Accomplishment" pattern of reinforcement will be most effective in stimulating opt-in choice among market initiators*

P8.2: *"Pleasure" pattern of reinforcement will be most effective in stimulating opt-in choice among early imitators*

P8.3: *"Accumulation" pattern of reinforcement will be most effective in stimulating opt-in choice among late imitators*

P8.4: *"Maintenance" pattern of reinforcement will be most effective in stimulating opt-in choice among last adopters*

P8.5: *Affective reactions to situations will vary across the four groups of adopters.*

The analysis started with reliability assessment for the original and translated DSI scales. Then, to test whether each adopter group would be most susceptible to a certain pattern of reinforcement (**P5.1-5.4**), adopters were classified into four groups based on their summed DSI scores'; with the cutting points being determined by the standard deviation of the final sample (Goldsmith 2001). The ranges were 6-15 for last adopters; 16-24 for late imitators; 25-33 for early imitators and 34-42 for market initiators. This resulted in the sample being divided into 12 last adopters (20.0%); 12 late imitators (20.0%); 30 early imitators (60.0%) and 6 market initiators (10.0%).

To compare their opt-ins across operant classes (**P8.1-8.4**), the data was split by adopter groups and one-way between-group ANOVA, followed by a post hoc test, performed with opt-ins as a dependent variable and the operant class as an independent variable.

Similarly, to compare levels of Pleasure and Arousal across adopter groups (**P8.5**), two one-way between-group ANOVAs with post hoc tests were performed, with Pleasure and Arousal functioning as dependent variables and adopter types as independent variables. In relation to Dominance (**P8.5**), since Dominance was found to differentiate between open and closed settings, it was of interest to analyse the differences in the adopters' levels of Dominance in each setting separately. Therefore, the data was split by setting, and one-way between-group ANOVA was performed with Dominance as a dependent and adopter groups as an independent variable.

4.6.2 Results

Cronbach's alpha coefficients for the DSI scale (Goldsmith and Hofacker 1991) were .92 for the original scale and .95 for the translated version. As they were above the recommended .070 level (Nunnally 1978) both versions were deemed reliable and the analysis proceeded to testing inter-group differences (**Figure 21a**).

For *market initiators,* there were no significant differences in opt-ins across operant classes [$F(3, 20)=1.0$, $p=.40$]. There was homogeneity of variance between groups as assessed by Levene's test for equality of error variances.

For *early imitators*, *late imitators* and *last adopters*, the significance values for Levene's test were significant, indicating that homogeneity of variance assumption had been violated. However, robust test of equality of means confirmed that within each of the three groups, there were significant differences in their opt-ins across the four operant classes ($p<0.05$).

Specifically, the Games-Howell post hoc test revealed that *early imitators* opted-in for m-advertising significantly more frequently in the "Accomplishment" scenarios than in "Accumulation" and "Maintenance" [$F(3,116)=3.7$, $p<0.05$]. The difference between their opt-ins in "Accomplishment" and "Pleasure" was however non-significant (**Figure 21b**)

For *late adopters,* a significant difference in the opt-ins was found only between "Accomplishment" and "*Maintenance",* with "Maintenance" scoring higher on opt-ins than "Accomplishment" [$F(3,44)=3,4$, $p<0.05$]. Contrary to the expectation, "Accumulation" was not the preferred option for late adopters (**Figure 21c)**.

For *last adopters, "Maintenance"* was preferred to "Pleasure" and "Accumulation" [$F(3,44)=9$, $p<0.05$]; but not to "Accomplishment", where the difference in opt-ins was non-significant (**Figure 21d**).

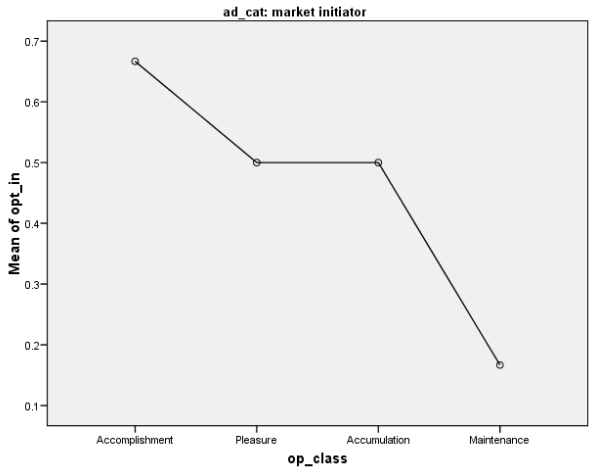


Figure 21a: Mean opt-ins of market initiators across operant classes of behaviour
(no significant differences in opt-ins across four operant classes)

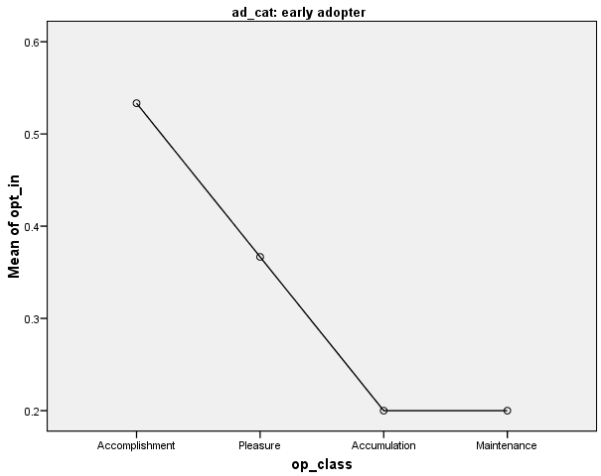


Figure 21b: Mean opt-ins of early imitators across operant classes of behaviour
("Accomplishment "significantly > "Accumulation" and "Maintenance", but not "Pleasure")

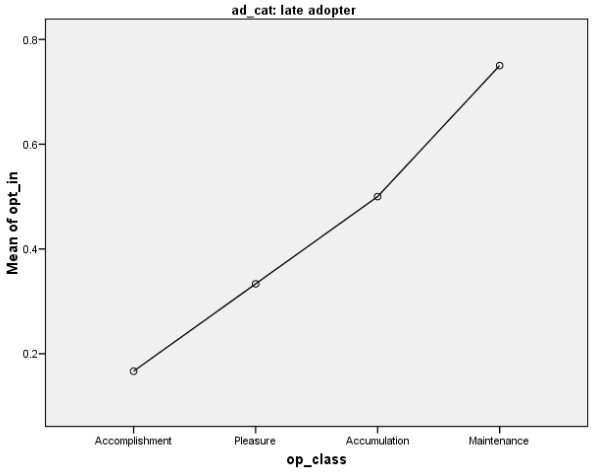


Figure 21c: Mean opt-ins of late imitators across operant classes of behaviour
("Maintenance" > "Accomplishment"; "no significant differences in opt-ins between "Accumulation" and other operant classes

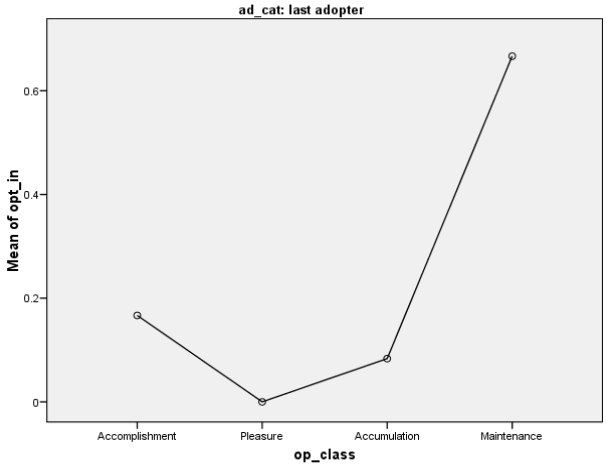


Figure 21cd Mean opt-ins of last adopters across operant classes of behaviour
("Maintenance" > "Pleasure" and "Accumulation" but not "Accomplishment"

With regards to differences in affective responses, ANOVA identified significant differences in both Pleasure [$F(3, 236)=5.2$, $p=.002$] and Arousal [$F(3, 236)=2.73$, $p=.044$] across adopter groups. However, post hoc tests revealed that significant differences in the levels of Pleasure were only found for last adopters, who scored significantly lower on Pleasure than all other groups; whereas the differences amongst other groups were insignificant. For Arousal, the post hoc tests did *not* confirm any significant differences, which indicated a Type I error in the ANOVA..

The difference in the felt Dominance across adopter groups was significant in both open settings [$F(3, 116)=24.94$, $p=.00$] and closed settings [$F(3, 116)=49.71$, $p=.00$]. In open settings, innovativeness was positively related to felt Dominance; and in closed settings it was inversely related to Dominance. In other words, whereas in the open settings, high innovativeness intensified feelings of being in control, in the closed settings, it intensified felt submissiveness (**Figures 21e** and **21f**).

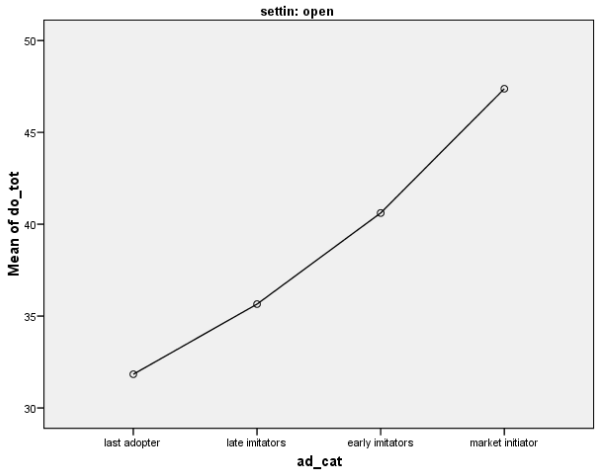


Figure 21e: Dominance levels in open settings across adopter groups
(The differences in the levels of Dominance are significant in all cases, except between late imitators and last adopters)

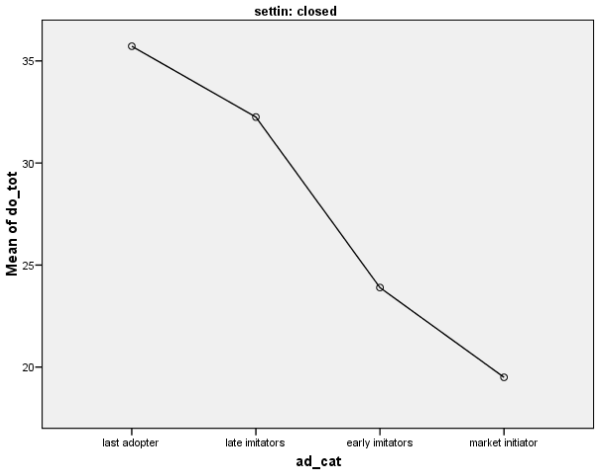


Figure 21f: Dominance levels in closed settings across adopter groups
(The differences in the levels of Dominance are significant in all cases, except between early imitators and market initiators)

Post hoc tests have confirmed that in the open settings these differences were significant in all cases, except between late imitators and last adopters. Similarly, in the closed settings they were significant in all cases, the pair of early imitators and market initiators being the only exception.

4.6.3 Discussion

The analysis has shown that relationships between adopter types and reinforcement patterns do not follow the predicted pattern. Although the findings confirm that last adopters generally prefer Maintenance to other reinforcement patterns; other adopter groups display notably different tendencies. Therefore, **P8.4** has been supported and **P8.1-8.3** has been rejected.

Generally, as far as the two middle groups are concerned, these results replicate the results of Project II, where both early and late imitators did not behave distinctively but instead showed tendencies to display behaviours similar to those of initiators and last adopters (i.e. preferred "Accomplishment" and "Maintenance" reinforcement patterns), respectively. As discussed in Project II, a plausible explanation may be that early imitators copy reinforcement preferences of initiators in order to maximise the benefits of the m-advertising; whereas late imitators on the other hand try to minimise risks by opting-in for the m-advertising in the most basic "Maintenance" scenarios.

The results on the behaviours of the initiators and last adopters are however slightly different from those reported in Project II whereby initiators and last adopters were found to prefer "Accomplishment" and "Maintenance" reinforcement patterns, respectively. Specifically, in Project III, market initiators appear to have no particular preference toward reinforcements. Taken together with the results of Project II, this further suggests that although initiators generally may have a preference towards "Accomplishment" (as the result of Project II suggest); this preference is not necessarily stable (result of Project III). Initiators are therefore not loyal or stable in their preferences and if they find a subscription offer attractive they may opt-in for it in any of the four operant classes. The finding that initiators tend to adopt the innovation at all diffusion stages (i.e. reinforcement patterns) is consistent with the general diffusion theory (Bass, 1969; Mahajan, Muller, & Bass, 1990) as well as with behavioural profiles of innovators in the literature (Moore, 1999).

With regards to the last adopters, whose opt-in preferences would appear to confirm the proposition, there is also an interesting deviation from the rule. The mean opt-ins of last adopters across the four scenarios are U-shaped and the difference between opt-ins in "Accomplishment" and "Maintenance" is insignificant. This result is noteworthy as it could indicate a so-called laggard leap-frogging effect, whereby laggards may display behaviors similar to those of innovators (Goldenberg & Oreg, 2007). This finding suggests that although last adopters do generally prefer to subscribe to m-advertising in the most basic form (e.g. mobile banking); they nevertheless can be attracted to more exclusive types of m-advertising (e.g. luxury hotel newsletters).

Most interestingly, although no stable significant relationship has been identified between emotion of Pleasure and Arousal and consumer innovativeness; the test of the differences in the levels of Dominance has provided a new layer to the understanding on the role of innovativeness in consumer behavior towards m-advertising. This finding is consistent with the general argument that highly innovative people are independent in their choice making

(Lafferty et al., 2005; Midgley, 1977; Midgley & Dowling, 1978). Their high perceptiveness towards the degree of the setting openness can thus be interpreted as another manifestation of the importance they attach to freedom.

With regard to the fact that in open settings, the identified differences were non-significant between the two groups of the *least* innovative participants (late imitators and last adopters); and in closed settings they were non-significant between the two groups of the *most* innovative participants (imitators and market initiators), would further support the earlier identified tendency of the two middle groups to behave similarly to their neighbouring "extreme" adopter groups. In particular, in open settings, late imitators are just as unable to correctly recognise the openness of the setting condition as last adopters; and in closed settings early imitators are just as sensitive to the limitation of freedom as market initiators. Therefore, overall, the result of Project III have further confirmed the identified irregularities in the choice behaviours of early and late imitators and has additionally contributed to the understanding of the reinforcement preferences of initiators and last adopters as well as the new type of relationship between innovativeness and sensitivity to the setting closure.

5. Conclusion

Project III sought to conclude the inquiry by conducting a laboratory experience to test the effects of previously identified opt-in determinants. The study introduced a novel methodology for situation representation which included animated picture slides and embedded audio messages. This design has differentiated this study from the previous research on situational influences whereby situations were traditionally presented in textual format (e.g. Foxall, 1997b; Lutz & Kakkar, 1975; Mehrabian & Russell, 1974). The study also contributed to the field methodologically by presenting translated Russian language versions of the PAD (Mehrabian & Russell, 1974) and DSI (Goldsmith & Hofacker, 1991) scales which both proved highly reliable.

Project III has revealed that the cultural background of the consumer is irrelevant to opt-in choice prediction, indicating that m-advertising is not particularly sensitive to cultural influences. With the equally high levels of effectiveness of the designed scenarios in both cultural groups, this result has confirmed cross-cultural validity of the developed approach for opt-in stimulation. Taken together with Project II, this has indicated that the opt-in choice is only influenced by the learning history of direct past experiences with m-advertising and m-advertisers; but not by the broader culture-related experiences.

Furthermore, in consistence with the behaviourist logic, emotional responses proved not to vary across cultures. Both cultural groups displayed similar emotions towards all offers. Taken together with the earlier finding that cultural background is irrelevant for the opt-in choice prediction, it can therefore be concluded that culture as such can be disregarded in developing strategies for m-advertising opt-in stimulation. International retailers using m-advertising in Western countries thus do not necessarily need to adjust their strategies to the post-Soviet market.

In addition, Project III has further supported the findings of Project II that the closed setting is more effective in stimulating opt-ins than the open setting. It can therefore be concluded that the closed setting is an effective opt-in stimulation tool.

With regards to emotions, although it has been confirmed that the Dominance dimension of the PAD scale (Mehrabian and Russell 1974) does differentiate between the open and closed setting; Project III has not found empirical support for the propositions on the relatedness of Pleasure and Arousal with Utilitarian and Informational reinforcements, respectively. Although the latter result has contradicted previous research (Foxall, 1997b, 1997c; Foxall & Greenley, 1999; Yani-de-Soriano et al., 2002) this lack of relatedness may be attributed to the research design. Specifically, whereas earlier studies have measured PAD emotions towards the setting (e.g. pleasure from restaurant environment increases approach behaviour towards *that* restaurant), Project III has used PAD components to measure emotions not towards the setting itself, but towards a *service* offered within that setting. The association between Pleasure and Arousal with the respective reinforcements could have been consequently lost. With regards to Dominance, the fact that it still differentiated between open and closed settings has suggested that the association between these two constructs must have been very strong.

The disconfirmation of the Pleasure and Arousal propositions should not however be viewed as a weakness, as the initial design and purpose of the PAD measurement was considerably different. Therefore, the result may instead serve as an indication that the relationships identified in earlier studies (Foxall, 1997b, 1997c; Foxall & Greenley, 1999; Yani-de-Soriano et al., 2002) only hold when emotions are measured in relation to the environment rather than to the affiliated products.

Notwithstanding the lack of relatedness with the reinforcement construct, emotions have been found to be strongly associated with the opt-in choice. Increases in both Pleasure and Arousal

are thus capable of increasing the opt-in probability. Similarly, low Dominance levels (closed setting) are useful for stimulating the opt-ins.

In consistence with Project II, the results have shown that rather than preferring a single type of reinforcements, early imitators prefer to obtain high levels of both the practical and image-related benefits; and late imitators instead prefer that the levels of both types of reinforcement are low. Therefore, it would be advisable to additionally provide early and late imitators with an option to opt-in for m-advertising in "Accomplishment" and "Maintenance" scenarios, respectively.

With regards to initiators and last adopters, two intriguing findings have emerged that further complement the results of Project II. In particular, the results suggest that reinforcement preferences of market initiators are not exclusive to the "Accomplishment" operant class, as Project II previously suggested. Although they might prefer the "Accomplishment" scenario over other operant classes of behaviour, as both the Project II and the opt-in frequency analysis in Project III seem to suggest, they are not necessarily "loyal" to this type of behaviour and can also opt-in for m-advertising in situations with "Pleasure", "Accumulation" and "Maintenance" patterns of reinforcements. This finding is noteworthy as it demonstrates that initiators remain active *throughout* the diffusion process and it would therefore be most reasonable to offer this group a wide range of m-advertising options covering all types of reinforcement patterns.

Another intriguing result is that last adopters, besides being attracted to the "Maintenance" reinforcement pattern can opt-in for m-advertising in "Accomplishment" scenarios. Therefore, to maximise opt-ins amongst this group, advertisers should offer them two types of subscription- both the basic form of m-advertising that they can use in their daily lives and the most high quality and prestigious types of m-advertising service that they can use occasionally- such as subscription to a world-class hotel newsletter or exclusive invitations to private events they are interested in.

Finally, the fact that highly innovative people are exceptionally perceptive to the degree of behavior setting openness; whereas their less innovative counterparts are relatively insensitive to it, is particularly interesting. However, since the closed setting condition has proven to influence opt-ins positively for all participants, it appears that the identified differences in adopters' perceptiveness towards the closure may be unimportant to the prediction of choice outcome. Regardless of whether consumers feel the change in the setting scope, they are still affected by it. Therefore, this particular finding should be interpreted as a contribution to the

general knowledge, rather than a useful addition to the practical approach to the opt-in stimulation this thesis has sought to develop. On this basis, it is concluded that this issue does not require additional examination in this thesis and the investigation into the practical opt-in predictors is thereby deemed complete.

CHAPTER SIX

GENERAL DISCUSSION

1. Introduction

The question raised by this thesis is: How can organisations get seemingly unwilling and disinterested consumers to subscribe to m-advertisements? Not only is the m-advertising opportunity attractive in itself, but the growing insufficiency of traditional marketing media with regards to maintaining consumer interest (Constantinides, 2006; Heller, 2006; McKenna, 1995; Ranchhod, 2007) serves to underline the importance of the opt-in issue. Although previous research on m-advertising opt-ins has revealed a number of important factors influencing consumer choice, this thesis has identified several gaps in existing knowledge.

In particular, as will be recalled, this thesis addressed three gaps in existing m-advertising literature. *Firstly,* earlier studies have presented a mixed account of choices, without clearly differentiating between consumer-related and organisation-related factors. *Secondly*, in addressing choice antecedents, previous studies have not adequately acknowledged their potentially complex interrelationships. *Thirdly,* there is an important issue with regards to the focus of the research. In particular, the literature has almost exclusively focused on the broader construct of consumer momentary "acceptance" of m-advertising, rather than on the more specific concept of the "opt-in" choice, which implies not only initial acceptance but also continued use of the service. On a related note, previous studies have focused on *pre*-behavioural variables, which presumably lead to m-advertising acceptance, rather than on the *actual* behaviours.

In addressing these limitations, this thesis has taken a fresh perspective on the opt-in issue by providing an alternative behavioural explanation of the consumer opt-in choice. The proposed model, based on the BPM (Foxall, 1990, 1997a), differentiates between consumer-related and organisation-related choice predictors, accounts for their interactions (i.e. situational influences) and places the actual opt-in choice at the centre of the inquiry.

This Chapter consolidates discussions from the previous chapters by evaluating the proposed approach for stimulating opt-ins for m-advertising. The discussion is therefore structured around three topics: *section 2* discusses practical and theoretical contributions of this thesis; s*ection 3* addresses its limitations and suggests avenues for future research; and, *section 4* concludes the discussion by providing an overall summative evaluation of the proposed behavioural account of the consumer opt-in choice.

2. Research Contributions

2.1 Practical Contributions

This thesis contributed to the understanding of the opt-in issue by identifying specific and practical ways in which organisations can predict and stimulate opt-ins. Most importantly, all the BPM components have been proven to be strongly related to opt-in choices, indicating both the theoretical legitimacy and the practical effectiveness of the adopted behavioural perspective.

Specifically, this thesis has demonstrated the overwhelming importance of behaviour setting in the m-advertising opt-in choice. Among the behaviour setting factors, the most important is the physical setting, which mainly consists of the content characteristics of m-advertising. Therefore, it is especially important for retailers to improve the attractiveness of the m-advertising content by integrating entertaining features (e.g. games, videos) and promotional price content (e.g. best buys, bargains, sale alerts) into m-advertisements, by ensuring that the information supplied through the mobile channel is both aesthetically (i.e. engaging creative design) and functionally (i.e. offering practical information such as dates, directions, maps) appealing.

The regulatory setting, which is the second most important behaviour setting factor, functions as an opt-in barrier. Consumers are unlikely to subscribe when they are being pressured into following rules and meeting complicated requirements, such as the completion of application forms, downloading of additional software, sharing of private information and signing a fixed-term contract with the m-advertising provider. Although some might believe that such conditions increase people's perceptions of service exclusivity and status, this research finds no such effects, and shows that subscription requirements only serve to discourage potential users.

Taken together with findings on physical content characteristics, the results strongly suggest that consumers are most affected by practical service features (i.e. *what* it is and how *easy* it is to get it), while remaining relatively unaffected by other less tangible behaviour setting elements, such as temporal setting which includes season time (e.g. sales and holiday seasons), leisure time (e.g. lunch break), the timeliness of the m-advertising (e.g. time urgent information) and social factors such as personal recommendations and the overall popularity of m-advertising. On this basis, it is recommended that at this early stage of m-advertising diffusion retailers should focus primarily on the pragmatic aspects of m-advertising by

maximising the attractiveness of content and minimising the complexity of the opt-in procedure.

Another BPM component that has proven to be largely important for stimulating opt-ins is consumers' previous experiences with m-advertising and/or m-advertisers. The more rewarding such experiences have been, the higher the likelihood of the opt-in. Therefore, m-advertisers need to first, provide cues regarding the behaviour setting that activates positive past experiences with m-advertising; and second, to focus on building positive relationships with consumers prior to offering the subscription option. To elaborate, if consumers' previous experiences with m-advertising have been negative, the behaviour setting should alleviate negative associations by demonstrating a principal difference between the service being offered and the one responsible for past negative experiences. This can be achieved by underlining the key differentiating advantages of the offer, such as customisation, flexibility and direct practical benefits. For those consumers with positive or nonexistent past experiences with m-advertising, it would therefore be sensible to either activate rewarding past histories or create them by providing instant no-obligation benefits (e.g. discount coupon or exclusive event invitation as a reward for expressing interest in m-advertising). With regard to the respective role of past experiences with m-advertis*ers*, organisations are advised to focus on building customer relationships prior to introducing m-advertising initiatives. It is therefore advisable to offer m-advertising to regular consumers who are demonstrably interested in the firms' products, and/or services, rather than to first-time buyers.

On a broader stage, consumers' cultural background was found to have no effect on their opt-in choices, with both Western and post-Soviet consumers reacting to m-advertising offers in similar ways. This finding suggests that m-advertising, unlike more bio-basic activities (e.g. food gathering), is not affected by consumers cultural histories. A plausible explanation for this is that technology is a new form of behaviour, which is unaffected by cultural norms (e.g. Javenpaa, Tractinsky, & Vitale, 2000). On this basis, it is concluded that the only type of learning history that matters is past experiences with m-advertising and/or the m-advertiser, which adds even more significance to the above recommendations. An additional implication of this finding is that the behavioural approach designed in this thesis is equally effective in two distinctly different cultures, meaning that the techniques developed are culturally transferrable. This has particularly advantageous ramifications for the modern global market, especially considering that this new m-advertising business model is actively spreading across the globe (Sharma, Herzog, & Melfi, 2008).

In addition, the research has demonstrated the superiority of practical utilitarian reinforcements to the image-related informational reinforcements for stimulating opt-ins. Clearly, as mobile phones are very private devices, use of m-services such as m-advertising is rarely affected by considerations of status and image. Instead, people choose to subscribe for simple practical reasons, such as economic rewards (e.g. sign up incentives), bargains (e.g. indirect benefit of being notified about sales), general practical usefulness (e.g. new knowledge, map with directions, information about upcoming professional events), hedonic benefits (i.e. fun, interactive content), socialisation benefits (e.g. 2 for 1 offers, social event information), the benefit of relieving boredom (e.g. m-sponsored Sudoku games to play while waiting in a queue), the benefit of improved personal effectiveness (e.g. location-based information about points of interest one can access throughout a journey) and the mobility/convenience benefit (e.g. having coupons handy at all times).

Logically, aversive utilitarian consequences, such as spam and financial risks, have an equally strong negative influence on the opt-in choice, and also surpass informational risks in their degree of association with opt-ins. Taking this into consideration, it would be most sensible for retailers to concentrate effectively on communicating the pragmatic benefits of m-advertising, rather than relying on an image benefits approach.

Furthermore, of critical importance to opt-in stimulation is the understanding of the consumer's situation. This thesis has demonstrated that situations characterised by the closed setting can serve as an effective instrument for the opt-in stimulation. Therefore, retailers are strongly advised to pay special attention to the situations the m-advertising is to be presented and to offer the subscription only in situations where the behaviours setting are relatively closed. This is because in situations with closed setting conditions potential subscribers have no alternative means of receiving the utilitarian benefits offered and are thus more likely to be tempted to opt-in. The situation where Wi-Fi Internet on a train is only available to passengers who are subscribed to m-advertising is a perfect example of utilising this technique in practice. In this example, the retailers *selectively* target trains that are *long distance* and do *not* have a freely available Wi-Fi connection in order to have their m-advertising offer presented in the most favourable context.

In addition, this thesis examined the emotional aspects of opt-in choices and found that in the m-advertising context, Pleasure and Arousal affective responses to environment are not associated with the utilitarian and informational components of the BPM. In other words, the levels of pleasure and arousal did not change across situations characterised by different levels of utilitarian and informational reinforcements (i.e. across the four operational classes

of behaviour) in the expected manner. Although this contradicts the results from previous BPM studies (e.g. Foxall, 1997b), this result is nevertheless understandable in the context of the research design adopted. In particular, whereas earlier studies measured emotions directed at the setting, this thesis measured emotions not associated with the setting itself, but rather directed towards a *service* affiliated with that setting. Stated differently, the environment in which m-advertising was offered only operated in an intermediary capacity, the expectation being that emotions towards the setting would *transfer* to the m-advertising being offered *within* it. Therefore, the above noted absence of associations between emotions and the two types of reinforcements only serves to demonstrate that the emotions towards the *setting* (e.g. hotel) are unrelated to the benefits offered by its affiliated *m-advertising service.* With regards to Dominance, the association between the dominance and the setting scope however holds, indicating that the strength of this relationship is higher than associations with pleasure and arousal emotions with utilitarian and informational reinforcements, respectively.

Notwithstanding the fact that the pleasure and arousal emotions are not associated with m-advertising benefits, emotions play a very important role in stimulating consumer opt-ins for the m-advertising. Both pleasure and arousal are strongly and positively correlated with opt-ins across all operant classes of behaviour. Therefore, to attract potential subscribers, advertisers should offer their m-advertising subscriptions in an engaging and pleasure evoking manner, presenting offers in exciting and relaxing environments. In this regard, the best tactics would be to approach consumers in intrinsically pleasurable and unusual environments, such as hotels (i.e. new exciting city and relaxing hotel atmosphere would be likely to generate favourable arousal and pleasure affective reactions, respectively) and theme parks (i.e. arousal stimulated by social and physical environment and pleasure generated from the activity itself). Examples of m-advertising offers that can produce both the pleasure and the arousal may include prize draws with prizes from consumer's favourite brands, interactive mobile games and various applications that are creatively designed and also useful in practical terms.

With regards to dominance, it is negatively correlated with opt-ins, suggesting that consumers are most likely to opt-in for m-advertising when not feeling in control. In other words, dominance reflects the idea of the closed setting condition explained earlier. Importantly, lowered dominance levels should not be understood as a direct pressure, such as punishment for instance, but rather as a method of guiding people to make the opt-in naturally because of the specific circumstances they are in.

Additionally, in line with the behaviourist theory, this thesis has confirmed that consumers' emotional reactions to environments are not affected by culture. This finding suggests that emotions are universal and that human beings have very similar affective reactions to m-advertising offers across cultural borders. Taken together with the previously discussed finding of the insignificance of culture for the opt-in prediction, this result further indicates that culture is generally an unimportant variable when making an opt-in prediction. Hence, the approach developed has again proven immune to cultural differences. It can therefore be argued that retailers wishing to use m-advertising internationally should not be cautious of any potential cultural barriers that may impede their operations.

Finally, a particularly important finding has been that consumer levels of innovativeness in the m-applications domain strongly influences their opt-in behaviours towards m-advertising both directly by increasing the opt-in likelihood and indirectly by increasing their susceptibilities to the BPM's choice antecedents. Therefore, to stimulate opt-ins effectively, it is critically important to focus on the most innovative consumers, especially at the early stage of m-advertising diffusion when innovators clearly represent the target market. Although this variable is unlikely to be known to advertisers, a general idea regarding a consumer's level of innovativeness can be derived from their use of other organisation's m-services such as m-applications. Those who downloaded relevant m-applications relatively early can thus be considered as the most promising audience for m-advertising. By targeting these consumers using the methods outlined above, m-advertisers can generate higher opt-ins.

From the moderating power of consumer innovativeness also follows the finding that the same approach would not be equally effective for all adopter groups. Therefore, instead of relying on the "one size fits all" logic, retailers should segment the consumer base on the basis of benefits sought (i.e. reinforcements), and develop a differentiated marketing approach for each group of adopters.

Specifically, the results of this thesis suggest that market initiators (innovators) are most attracted by offers maintained by high levels of both utilitarian and informational reinforcements ("Accomplishment"), whereas last adopters are most susceptible to reinforcement patterns characterised by low levels of both utilitarian and informational benefits ("Maintenance"). However, importantly, in both cases there are exceptions to the general rule. Market initiators tend to have unstable preferences and when they find m-advertising offers attractive enough, they can easily opt-in for m-advertising in situations maintained by other reinforcement patterns; i.e. "Pleasure", "Accumulation" and "Maintenance". These unstable switching behaviours are in line with behavioural profiles of

innovators (e.g. Moore, 1999). A similar, yet slightly more intriguing result has been found for last adopters. Although they generally prefer "Maintenance" scenarios, on certain occasions they can also display preferences towards the highest levels of reinforcement represented by the "Accomplishment" class. This behaviour of laggards is commonly known as a "leapfrogging effect" where consumers hold onto old possessions for long periods of time, thereby acting like typical laggards and then suddenly upgrade to a latest innovation several generations ahead of their old product. In this view, although providing "Accomplishment" and "Maintenance" options for initiators and laggards certainly appears necessary, to maximise the opt-in likelihood, both groups should be given the freedom to also opt-in for m-advertising in the other operant classes they prefer.

As far as early and late imitators are concerned, the results have shown that rather than preferring a single type of reinforcement, these two middle segments prefer medium levels of both utilitarian and informational benefits. Therefore, rather than providing early imitators with utilitarian and late imitators with informational benefits, retailers should adopt a balanced approach. To be more specific, the behaviours of early imitators tend to resemble those of market initiators in that they opt-in for m-advertising in both "Pleasure" and "Accomplishment" scenarios. Similarly, late imitators display tendencies to behave as both neighbouring segments, the early imitators and last adopters, and opt-in in "Pleasure", "Accumulation" and "Maintenance" scenarios. Whereas the behaviours of early imitators may be caused by a desire to maximise both types of benefits, the behaviours of late imitators may be an attempt to minimise any potential risks associated with subscription.

To illustrate this further, **Figure 22** utilises the contingency category matrix to show specifically where the preferences of each adopter group lie. As can be seen in **Figure 22,** initiators have unstable preferences and can opt-in in to every operant class. For this reason, they are represented by a circle, which signifies the all-roundness of their reinforcement preferences. Early imitators, go both ways- they prefer both the "Pleasure" scenarios and "Accomplishment" situations. This group is therefore represented by a cross. Late imitators opt-in for m-advertising in a wide range of situations, generally preferring less risky situations maintained either by medium level of a single reinforcement or by low levels of both reinforcements. They are thus represented by a figure with many angles, which serves to signify an absence of a distinct reinforcement preference. Finally, the leapfrogging behaviours of last adopters are particularly interesting. Rather than holding onto the safest option, they may occasionally have sudden sparks of innovativeness and opt-in for m-advertising in the "Accomplishment" scenario. This segment is therefore represented by a sun.

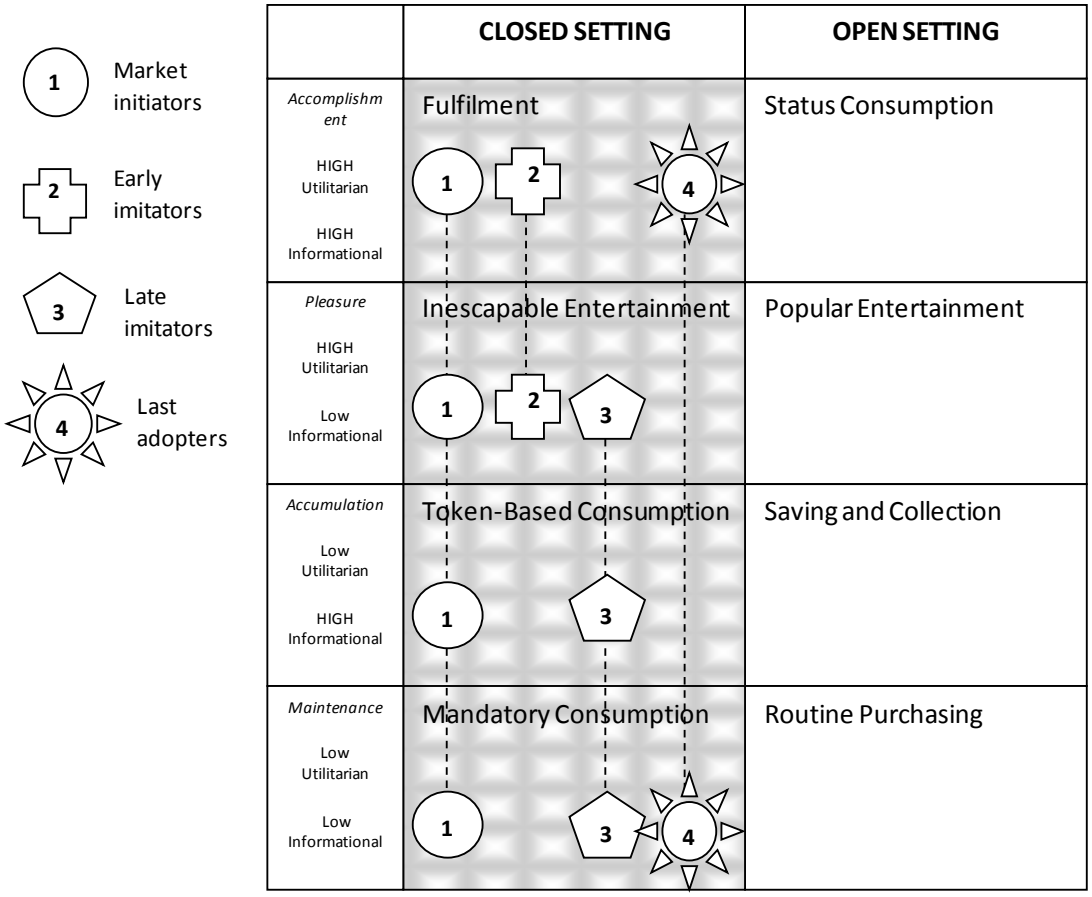


Figure 22: Adopters' reinforcement preferences across situations

Since it is difficult to infer the recommended order of reinforcement patterns from the above representation of adopters' choices, **Figure 23** provides a complementary visual explanation.

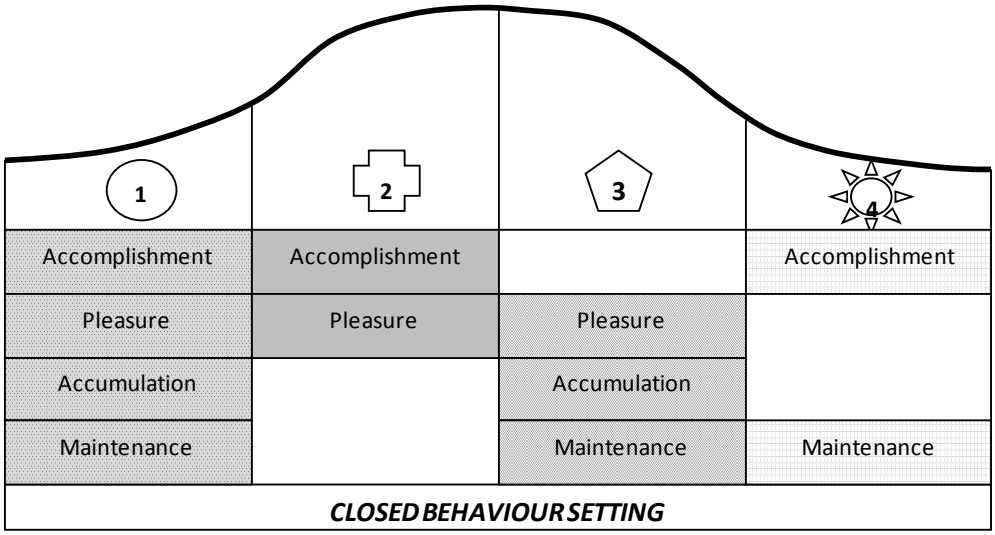


Figure 23: Adopters' reinforcement preferences across the diffusion process

As shown in **Figure 23,** at the first stage, where the target market is initiators, it is recommended to offer various kinds of m-advertising to enable them to opt-in in any of the four operant classes. This means that m-advertising should be offered in many forms; both the most prestigious (e.g. exclusive invitations, luxury) and the most basic and routine types (e.g. together with mobile banking brands or electricity billing). At the growth stage, the two most important operant classes are "Accomplishment" and "Pleasure". That is, the focus should shift from the wide range of m-advertising options to m-advertising options most infused with utilitarian benefits (e.g. location-based advertisement with maps) and to those that also communicate high status of subscribers (e.g. exclusive promotions to Harrods club members). Once m-advertising starts to mature and gradually lose its novelty and appeal, it is recommended to focus more on the three operant classes with lower levels of reinforcements. Although the scope of scenarios here is almost as wide as that of initiators, unlike with initiators, late imitators do not require *high* levels of reinforcement. Therefore, the options should be varied but mostly purely practical. Finally, at the final stage of diffusion, last adopters should be given the freedom to select either the most basic type of m-advertising or the most prestigious m-advertising service with the highest utilitarian potential.

On a related note, the comparison of adopters' affective responses to the opt-in situations has revealed that among the four adopter segments, market initiators are the most and last adopters are the least perceptive towards behaviour setting closure. Specifically, initiators immediately recognise the difference between open and closed settings and thus have correspondingly high Dominance levels in open settings and low Dominance levels in closed settings. In contrast, last adopters often do not differentiate between the two types of settings, and their Dominance levels do not correctly reflect the degree of setting closedness. This finding further underlines the wide-ranging effects of the innovativeness construct; i.e. it not only affects consumers' behavioural responses both directly and indirectly but it also influences their emotional responses to situations. An obvious implication of this finding is that the effectiveness of the setting closure is immune to whether or not the consumers are able to recognise the presence of a closed setting condition, which further validates the use of this method.

As evident from the above discussion, the research has uncovered a number of valuable opt-in predictors that, if effectively managed, can considerably improve consumer take up of m-advertising, and maintain their continued use of this service. The method devised for stimulating opt-ins, as well as improved understanding of the opt-in choice, can certainly prove beneficial for firms currently using or wishing to engage in m-advertising practices.

2.2 Theoretical Contributions

Theoretical contributions of this thesis are twofold. First, the model devised for opt-in stimulation contributes to the earlier identified gaps in existing m-advertising literature by *separating* organisation-related and consumer-related antecedents of choice, by accounting for their *interactions* and narrowing the focus given to the *actual* opt-in choice. The proposed original model (BPM) that was used for filling these gaps is an innovation in itself, especially in the m-advertising field, is still at an early development stage. It can thus be stated that the soundness of applying behavioural principles in the m-advertising context, which this thesis has demonstrated, has contributed to the "interplay of competing explanations" (Feyerabend, 1993)) in the m-advertising field by adding a new perspective to the issue. Furthermore, as previous mobile marketing studies have been criticised for narrow geographical focus (Harris et al., 2005, p.212; Ngai & Gunasekaran, 2007, p.10; Varnali & Toker, 2010, p.140), this thesis has also contributed to the existing literature on m-services by expanding their coverage to the post-Soviet region, which since the fall of the Iron Curtain still remains largely under-researched in comparison to the Western world (Schuh & Holzmuller, 2003).

Second, since behavioural accounts of consumer choice have previously been proposed in a diverse range of *consumption* contexts, including in-store buying (e.g. Foxall et al., 2004; Oliveira-Castro et al., 2005), counterfeit buying (Xiao, 2006; Xiao & Nicholson, 2010), environment-impacting consumption (e.g. Foxall, 1995b, 2006), online buying (e.g. DiClemente & Hantula, 2003b; Rajala & Hantula, 2000), and multichannel consumption (Nicholson, 2005; Nicholson et al., 2002), this research also contributes to the BPM research programme when applying the model to a new, previously unexplored *non*-commercial context. An additional contribution of the BPM literature lies in the incorporation of the innovativeness variable into the model and demonstration of its relevance to consumer choice prediction in new service contexts. Specifically, this research has shown the possibility of the innovativeness functioning as a direct choice predictor in the BPM as well as the possibility of the BPM choice antecedents being moderated by the level of consumer innovativeness. Although this argument has yet to achieve consensus this research has demonstrated that the incorporation of the innovativeness component into the behavioural model of choice can improve its predictive capacity in new service markets.

3. Research Limitations and Avenues for Future Research

Despite the above described practical and theoretical contributions, the empirical basis for the conclusions in this study is limited in several ways. Firstly, the proportion of data collected in the two cultures is uneven as most of the data was collected in the UK and Kazakhstan was

only used in the final study. It might have been advisable to start the investigation in two countries simultaneously and to develop the item pool based on the data from both Western and post-Soviet consumers. This could perhaps have helped to uncover other choice determinants that were not identified from the UK sample. However, due to time limitations such extensive data collection was not possible. Therefore, further quantitative investigations of the opt-in choice in the post-Soviet region, and Kazakhstan in particular, represent one of prospective avenues for future research.

Secondly, as m-advertising is currently at an early development stage and many consumers are not familiar with this service, actual consequences of opt-in choice could not be effectively captured. This thesis therefore used "goal-directed" utilitarian and informational consequences as a substitute for consequences of opt-in behaviours, which in many cases were yet to occur. Although this operantionalisation of consequences was certainly unavoidable under these circumstances, it may have impacted the strength of analysis. Therefore, at *later* diffusion stages, it would be appropriate to pursue further investigation of the effects of actual rather than goal-directed opt-in consequences on opt-in choices.

Thirdly, as will be recalled, this thesis has focused exclusively on several selected formats of push-type of m-advertising, namely, message-based, video-based and in-application. Although its focus on the three most widely used and familiar m-advertising formats can hardly be considered a limitation, other formats of m-advertising, which are only now starting to establish themselves in the marketplace, represent a promising avenue for future research at later diffusion stages. It would certainly be of value for academic knowledge to examine consumer behaviours towards these new m-advertising formats once they become widespread, and to cross-compare consumer choices in relation to various m-advertising formats.

Finally, in testing the influence of culture on consumer opt-in choices, this thesis took a cross-cultural direction and adapted two widely-known research instruments, the DSI (Goldsmith & Hofacker, 1991) and PAD (Mehrabian & Russell, 1974) scales**,** into the Russian language. Since to the best of the author's knowledge, these scales have not yet been available in Russian academic literature, the preliminary evidence regarding the high reliabilities of the adapted versions of these scales may provide an additional useful avenue for their future testing on larger samples.

4. Stimulating M-advertising Opt-in the Behaviourist Way

To summarise, the promise of the mobile channel continues to attract growing interest and m-advertising is becoming a lucrative industry (Sharma et al., 2008). However, the task of generating high initial acceptance, let alone the need to maintain continued use of m-advertising by consumers, poses a formidable challenge to retailers. Therefore, at this early stage of the industry's development, the issue of key importance is liberating the market's potential by overcoming the opt-in barrier.

This thesis is unique in investigating factors influencing consumer opt-in choice with the ultimate purpose of developing an effective practical solution to stimulate consumer opt-ins. Through the application of the BPM (Foxall, 1990, 1997a). this thesis has developed an operant account of consumer opt-in choice. Among the BPM's constructs, the most important three factors are physical settings, consumers' past relevant experiences and goal-directed consequences of the opt-in. The effectiveness of these three factors can be further enhanced by matching the reinforcement patterns of m-advertising to the preferences of specific adopter segments and by presenting the subscription offers within situations characterised by closed settings.

Most importantly of all, this thesis has documented evidence demonstrating that consumer opt-in choice is influenced by past histories of relevant behaviours, as well as by a wide range of contextual stimuli and behaviour consequences, as maintained by advertisers. Contrary to the widespread conviction of the opt-in choices being purely intentional, the choices are mere reactions to outside discriminative stimuli and can thus be effectively stimulated through a set of instruments controlled by organisations. Therefore, by demonstrating that consumer opt-in choice can be effectively stimulated by using behaviourist methods, this thesis has successfully challenged the dominant assumption of consumer intentionality in m-advertising literature. Although this argument is yet to gain acceptance in the m-advertising field, this view adds a new understanding of the opt-in choice and thus represents an important first step in the development of an alternative behavioural explanation.

REFERENCES:

Aarts, H., Verplanken, B., & Van Knippenberg, A. (1998). Predicting Behavior from Actions in the Past: Repeated Decision Making or a Matter or Habit? *Journal of Applied Social Psychology, 28*, 1355–1374.

Abarca, N., & Fantino, E. (1982). Choice and Foraging. *Journal of the ExperimentalAnalysis of Behavior, 38*, 117–123.

Abrahamson, E., & Rosenkopf, L. (1997). Social Network Effects on the Extent of Innovation Diffusion: A Computer Simulation. *Organization Science, 8*(3), 289-309.

Aggarwal, P., & Vaidyanathan, R. (2003). Use it or Lose it: Purchase Acceleration Effects of Time-Limited Promotions. *Journal of Consumer Behavior, 2*(4), 393-403.

Ahonen, T. T. (2006). *Communication Dominate Brands: Business and Marketing Challanges for the 21st Century* London: FutureText.

Aiken, L. S., & West, S. G. (1991). *Multiple regression: Testing and interpreting interactions*. Newbury Park: Sage.

Ajzen, I. (1991). The Theory of Planned Behavior. *Organizational Behavior and Human Decision Processes, 50*, 179-211.

Ajzen, I. (2002). Residual Effects of Past on Later Behavior: Habituation and Reasoned Action Perspectives. *Personality and Social Psychology Review, 6*(2), 107–122.

Ajzen, I., & Fishbein, M. (2005). The Influence of Attitudes on Behavior. In D. Albarracín & B. T. Johnson & M. P. Zanna (Eds.), *The handbook of attitudes* (pp. 173-221). Mahwah, NJ: Erlbaum.

Aldás-Manzano, J., Lassala-Navarré, K., Ruiz-Mafé, C., & Sanz-Blas, S. (2009). The Role of Consumer Innovativeness and Perceived Risk in Online Banking Usage. *International Journal of Bank Marketing 27*(1), 53-75.

Alden, D. L., Wayne, H. D., & Lee, C. (1993). Identifying Global and Cultural-Specific Dimensions of Humor in Advertising: A Multinational Analysis. *Journal of Marketing, 57*(April), 64–75.

Alpert, F. (1994). Innovator Buying Behavior over Time: The Innovator Buying Cycle and the Cumulative Effects of Innovations. *Journal of Product & Brand Management, 3*(2), 50-62.

Alwin, D. F., & Krosnick, J. A. (1991). The Reliability of Survey Attitude Measurement : The Influence of Question and Respondent Attributes. *Sociological Methods & Research, 20*, 139-182.

Amaldoss, W., & Jain, S. (2005). Conspicuous Consumption and Sophisticated Thinking. *Management Science, 51*(10), 1449–1466.

Anand, P., & Sternthal, B. (1990). Ease of Message Processing as a Moderator of Repetition Effects in Advertising. *Journal of Marketing Research, 27*(August), 345-354.

Anckar, B., Carlsson, C., & Walden, P. (2003, June 9-11). *Factors Affecting Consumer Adoption Decisions and Intents in Mobile Commerce: Empirical Insights.* Paper presented at the Proceedings of the 16th Bled eCommerce Conference eTransformation, Bled, Slovenia.

Andrade, E. B., & Cohen, J. B. (2007). On the Consumption of Negative Feelings. *Journal of Consumer Research, 34*, 283-300.

Andrews, F. M. (1984). Construct Validity and Error Components in Survey Measures: A Structural Modeling Approach. *Public Opinion Quarterly, 48*, 409-442.

Antioco, M., & Kleijnen, M. (2010). Consumer Adoption of Technological Innovations. *European Journal of Marketing, 44*(11/12), 1700-1724.

Areni, C. S., & Kim, D. (1993). The Influence of Background Music on Shopping Behavior: Classical Versus Top-Forty Music in a Wine Store. *Advances in Consumer Research, 20*, 326-340.

Areni, C. S., & Kim, D. (1994). The Influence of In-Store Lighting on Consumers' Examination of Merchandise in a Wine Store. *International Journal of Research in Marketing, 11*(4), 117-125.

Auty, S. (1992). Consumer Choice and Segmentation in the Restaurant Industry. *The Service industries Journal, 12*(3), 324-339.

Babin, B. J., & Darden, W. R. (1996). Good and Bad Shopping Vibes: Spending and Patronage Satisfaction. *Journal of Business Research, 35*, 201-206.

Babin, B. J., Darden, W. R., & Griffin, M. (1994). Work and/or fun? Measuring hedonic and utilitarian shopping value, *Journal of Consumer Research* (Vol. 20, pp. 644-656).

Bagozzi, R. P. (1981). Attitudes, Intentions, and Behavior: A Test of Some Key Hypotheses. *Journal of Personalitv and Social Psychology, 41*, 607-627.

Bagozzi, R. P., & Kimmel, S. K. (1995). A Comparison of Leading Theories for the Prediction of Goal-Directed Behaviours. *British Journal of Social Psychology, 34*(4), 437-461.

Bagozzi, R. P., & Warshaw, P. R. (1990). Trying to Consume. *Journal of Consumer Research, 17*, 127-140.

Bailey, J., & Bursch, M. R. (2002). *Research Methods in Applied Behavior Analysis*. Thousand Oaks: Sage Publications.

Baker, J., Levy, M., & Grewal, D. (1992). An Experimental Approach to Making Retail Store Environmetal Decisions. *Journal of Retailing, 68*(4), 445-460.

Baker, J., Parasuraman, A., Grewal, D., & Voss, G. B. (2002). The Influence of Multiple Store Environment Cues on Perceived Merchandise Value and Patronage Intentions. *Journal of Marketing, 66*(April), 120-141.

Baker, W. E. (1999). When can Affective Conditioning and Mere Exposure Directly Influence Brand Choice? *Journal of Advertising, 28*(4), 31-46.

Balasubramanian, S., Peterson, R. A., & Jarvenpaa, S. L. (2002). Exploring the Implications of M-Commerce for Markets and Marketing. *Journal of the Academy of Marketing Science, 30*(4), 348-361.

Baldi, S., & Thaung, H. P.-P. (2002). The Entertaining Way to M-Commerce: Japan's Approach to the Mobile Internet- A Model for Europe? *Electronic Markets, 12*(1), 6-13.

Bamba, F., & Barnes, S. (2007). SMS Advertising, Permission and the Consumer: A Study. *Business Process Management Journal, 13*(6), 815-829.

Barker, R. G. (1968). *Ecological Psychology: Concepts and Methods for Studying the Environment of Human Behavior*. Stanford, CA: Stanford University Press.

Barnes, S. J. (2002). Wireless Digital Advertising: Nature and Implications. *International Journal of Advertising, 21*(3), 399-420.

Barnes, S. J., & Scornavacca, E. (2004). Mobile Marketing: The Role of Permission and Acceptance. *International Journal of Mobile Communications, 2*, 128-139.

Barnes, S. J., & Scornavacca, E. (2008). Uncovering Patterns in Mobile Advertising Opt-in Behaviour: A Decision Hierarchy Approach. *International Journal of Mobile Communications, 6*(4), 8-8.
Bartels, J., & Reinders, M. J. (2010). Consumer Innovativeness and its Correlates: A Propositional Inventory for Future Research. *Journal of Business Research, Article in Press*.
Barwise, P., & Strong, C. (2002). Permission-Based Mobile Advertising. *Journal of Interactive Marketing, 16*.
Bass, F. M. (1969). A New Product Growth Model for Consumer Durables. *Management Science, 15*(5), 215-227.
Batra, R., & Ahtola, O. T. (1990). Measuring the Hedonic and Utilitarian Sources of Consumer Attitudes. *Marketing Letters, 2*(2), 159-170.
Bauer, H. H., Barnes, S. J., Reichardt, T., & Neumann, M. M. (2005). Driving Consumer Acceptance of Mobile Marketing: A Theoretical Framework and Empirical Study. *Journal of Electronic Commerce Research, 6*, 181-192.
Baum, W. M. (1994). *Understanding Behaviorism: Science, Behaviour, and Culture*. Oxford: HarperCollins College.
Baumeister, R. F., Heatherton, T. F., & Tice, D. M. (1994). *Losing Control: How and Why People Fail at Self-Regulation*. San Diego, CA: Academic Press.
Baumgarten, S. A. (1975). The Innovative Communicator in the Diffusion Process. *Journal of Marketing Research, 12*, 12-18.
Bearden, W. O., & Shimp, T. A. (1982). The Use of Extrinsic Cues to Facilitate Product Adoption. *Journal of Marketing Research, 19*, 229-239.
Bearden, W. O., & Woodside, A. G. (1976). Interactions of Consumption Situations and Brand Attitudes. *Journal of Applied Psychology, 61*(6), 764-769.
Beatty, S. E., & Ferrell, M. E. (1998). Impulse Buying: Modeling its Precursors. *Journal of Retailing, 74*(2), 169-191.
Behling, O., & Law, K. S. (2000). *Translating questionnaires and other research instruments: Problems and solutions* (Vol. 07-131). Thousand Oaks, CA: Sage.
Beins, B. C. (2004). *Research method: A tool for life*. London: Pearson Education.
Belk, R. W. (1974). An Exploratory Assessment of Situational Effects in Buyer Behavior. *Journal of Marketing Research, 11*(2), 156-163.
Belk, R. W. (1975a). The Objective Situation as a Determinant of Consumer Behavior. *Advances in Consumer Research, 2*, 427-437.
Belk, R. W. (1975b). Situational Variables and Consumer Behavior. *Journal of Consumer Research, 2*(December), 157-164.
Belk, R. W. (1988). Possessions and the Extended Self. *Journal of Consumer Research, 15*(2), 139-168.
Belk, R. W. (1995). Studies in the New Consumer Behaviour. In D. Miller (Ed.), *Acknowledging Consumption* (pp. 58-95). London: Routledge.
Bemmaor, A. C. (1995). Predicting Behavior from Intention-to-Buy Measures: The Parametric Case. *Journal of Marketing Research, 32* 176–191.
Berger, J., & Heath, C. (2007). Where Consumers Diverge from Others: Identity Signaling and Product Domains. *Journal of Consumer Research, 34*(August).
Biglan, A., & Hayes, S. C. (1996). Should the Behavioral Sciences Become More Pragmatic? The Case for Functional Contextualism in Research on Human Behavior. *Applied and Preventive Psychology, 5*, 47-57.
Bijou, S. W. (1979). Some Clarifications on the Meaning of a Behavior Analysis of Child Development. *Psychological Record, 29*, 2-26.

Black, N. J., Lockett, A., Winklhofer, H., & Ennew, C. (2001). The Adoption of Internet Financial Services: A Qualitative Study. *International Journal of Retail & Distribution Management, 29*(8), 390-398.
Blake, B. F., Neuendorfb, K. A., & Valdiserric, C. M. (2005). Tailoring New Websites to Appeal to Those Most Likely to Shop Online. *Technovation, 25*, 1205–1214.
Bolles, R. C. (1979). *Learning Theory*. New York: Holt, Rinehart and Winston.
Bosmans, A. (2006). Scents and Sensibility: When Do (In)Congruent Ambient Scents Influence Product Evaluations? *Journal of Marketing, 70*, 32-43.
Bowden, J., & Corkindale, D. (2005). Identifying the Initial Target Consumer for Innovations: an Integrative Approach. *Marketing Intelligence & Planning, 23*(6), 562-573.
Briersch, R. A., Chintagunta, P. K., & Fox, E. J. (2009). How Does Assortment Affect Grocery Store Choice? *Journal of Marketing Research, 46*(April), 176-189.
Brislin, R. W. (1970). Back-Translation for Cross-Cultural Research. *Journal of Cross-Cultural Psychology1*, 185–216.
Brislin, R. W. (1976). Comparative Research Methodology: Cross-Cultural Studies. *International Journal of Psychology, 11*(3), 215-229.
Brislin, R. W. (1986). The Wording and Translation of Research Instruments. In W. Lonner & J. Berry (Eds.), *Field methods in cross-cultural research* (pp. 137-164). Beverley Hills, CA: Sage.
Brislin, R. W., Lonner, W. J., & Thorndike, R. M. (1973). *Cross-cultural research methods*. New York: Wiley.
Browne, M. W., & Cudeck, R. (1993). Alternative ways of assessing model fit. In K. A. Bollen & J. S. Long (Eds.), *Testing structural equation models* (pp. 136–162). Newbury Park, CA: Sage.
Bruner, G. C. I. (1990). Music, Mood, and Marketing. *Journal of Marketing, 54*(4), 94-104.
Burns, A. C., & Bush, R. F. (2003). *Marketing research: Online research applications* (fourth ed.): Prentice Hall, Pearson Education.
Burns, D. J. (2007). Toward an Explanatory Model of Innovative Behavior. *Journal of Business and Psychology, 21*(4), 461-487.
Burrell, G., & Morgan, G. (1979). *Sociological Paradigms and Organisational Analysis*. London: Heinemann.
Byers, P. Y., & Wilcox, J. R. (1991). Focus Groups: A Qualitative Opportunity for Researchers. *The Journal of Business Communication, 28*(1), 63-78.
Carroll, A., Barnes, S. J., Scornavacca, E., & Fletcher, K. (2007). Consumer Perceptions and Attitudes towards SMS Advertising: Recent Evidence from New Zealand. *International Journal of Advertising, 26*, 79-98.
Castano, R., Sujan, M., Kacker, M., & Sujan, H. (2008). Managing Consumer Uncertainty in the Adoption of New Products: Temporal Distance and Mental Simulation. *Journal of Marketing Research, XLV*(June), 320–336.
Catania, A. C. (1973). The Psychologies of Structure, Function and Development. *American Psychologist, 28*(434-443).
Catania, A. C. (1984). The Operant Behaviorism of B. F. Skinner. *Behavioral and Brain Sciences, 7*, 473-475.
Census. (2011). Census of the Republic of Kazakhstan, *Republic of Kazakhstan Statistical Agency*.
Chandrasekaran, D., & Tellis, G. J. (2008). Global Takeoff of New Products: Culture, Wealth, or Vanishing Differences? *Marketing Science, 27*(5), 844–860.

Chao, A., & Schor, J. B. (1998). Empirical Tests of Status Consumption: Evidence from Women's Cosmetics. *Journal of Economic Psychology, 19*, 107±131.
Chatterjee, R., & Eliasberg, J. (1990). The Innovation Diffusion Process in a Heterogeneous Population: A Micromodeling Approach. *Management Science, 36*(9), 1057-1079.
Chau, P. Y. K., & Hui, K. L. (1998). Identifying Early Adopters of New IT Products: A Case of Windows 95. *Information & Management, 33*, 225-230.
Choi, J. Y., Song, H. S., & Kim, S. H. (2007). MCORE: a Context-Sensitive Recommendation System for the Mobile Web. *Expert Systems, 24*(1), 32-46.
Choi, Y. K., Hwang, J.-S., & McMillan, S. J. (2008). Gearing Up for Mobile Advertising: A Cross-Cultural Examination of Key Factors That Drive Mobile Messages Home to Consumers. *Psychology & Marketing, 25*(8), 756–768.
Chow, S., Ceisi, R. L., & Abel, R. A. (1990). The Effects of Situational and Intrinsic Sources of Personal Relevance on Brand Choice Decisions. *Advances In Consumer Research, 17*, 755-760.
Christensen, L. B. (1997). *Experimental Methodology* (7th ed.). Needham Heights, MA: Allyn and Bacon.
Chtourou, M. S., & Souiden, N. (2010). Rethinking the TAM model: Time to Consider Fun. *Journal of Consumer Marketing, 27*(4), 336–344.
Churchill, G. A. J. (1979). A Paradigm for Developing Better Measures of Marketing Constructs. *Journal of Marketing Research, 26*, 64-73.
Churchill, G. A. J., & Peter, G. P. (1984). Research Design Effects on the Reliability of Rating Scales: A Meta-Analysis. *Journal of Marketing Research 21*(4).
Churchill, G. A. J., & Peter, J. P. (1984). Research Design Effects on the Reliability of Rating Scales: A Meta-Analysis. *Journal of Marketing Research, 21*(4), 360-375.
Citrin, A. V., Sprott, D. E., Silverman, S., & Stem, J., D.E. (2000). Adoption of Internet Shopping: The Role of Consumer Innovativeness. *Industrial Management & Data Systems, 100*(7), 294-300.
Cleff, E. B. (2007a). Implementing the Legal Criteria of Meaningful Consent in the Concept of Mobile Advertising. *Computer Law & Security Report, 23*(3), 262-269.
Cleff, E. B. (2007b). Privacy Issues in Mobile Advertising. *International Review of Law, Computers & Technology, 21*(3), 225-236.
Clement, J. (2007). Visual Influence on In-Store Buying Decisions: An Eye-Track Experiment on the Visual Influence of Packaging Design. *Journal of Marketing Management, 23.* (9-10), 917-928.
Cobanoglu, C., Warde, B., & Moreo, P. J. (2001). A Comparison of Mail, Fax and Web-based Survey Methods. *International Journal of Market Research, 44*(3), 441-452.
Cochran, W. G. (1977). *Sampling techniques* (3rd ed.). New York: John Wiley & Sons.
Cohen, J. (1960). A Coefficient of Agreement for Nominal Scale. *Educational and Psychological Measurement, 20*(q), 37–46.
Cohen, J., Cohen, P., West, S. G., & Aiken, L. S. (2003). *Applied multiple regression/correlation analysis for the behavioral sciences* (3rd ed.). Mahwah, NJ: Lawrence Erlbaum.
Conner, M., & Armitage, C. J. (1998). Extending the Theory of Planned Behavior: A Review and Avenues for Further Research. *Journal of Applied Social Psychology, 28*(15), 1429-1464.

Constantinides, E. (2006). The Marketing Mix Revisited: Towards the 21st Century Marketing. *Journal of Marketing Management, 22*, 407-438.
Cotte, J., & Wood, S. L. (2004). Families and Innovative Consumer Behavior: A Triadic Analysis of Sibling and Parental Influence. *Journal of Consumer Research, 31*(78-86).
Creswell, J. W. (1994). *Research Design: Qualitative and Quantitative Approaches*. London: Sage Publications.
Cryder, C. E., Lerner, J. S., Gross, J. J., & Dahl, R. E. (2008). Misery Is Not Miserly: Sad and Self-Focused Individuals Spend More. *Psychological Science, 19*(6), 525-530.
Czaja, R., & Blair, J. (2005). *Designing surveys: a guide to decisions and procedures*. Thousand Oaks: Pine Forge Press.
Dahl, D. W., Manchanda, R. V., & Argo, J. J. (2001). Embarrassment in Consumer Purchase: The Roles of Social Presence and Purchase Familiarity. *Journal of Consumer Research, 28*, 473-481.
Danko, W. D., & Maclachlan, J. M. (1983). Research to Accelerate Diffusion of a New Invention. *Journal of Advertising Research, 29*(June/July), 29-43.
Davies, B. J., Kooijman, D., & Ward, P. (2003). The Sweet Smell of Success: Olfaction in Retailing. *Journal of Marketing Management, 19*, 611-627.
Davies, J. D., Foxall, G. R., & Pallister, J. G. (2002). Beyond the Intention–Behaviour Mythology An Integrated Model of Recycling. *Marketing Theory, 2*, 2-113.
Davis, A., & Bremner, G. (2006). The Experimental Method in Psychology. In G. M. Breakwell & S. Hammond & C. Fife-Schaw & J. A. Smith (Eds.), *Research methods in psychology* (3 ed., pp. 65-87). London: Sage Publications.
Davis, F. D. (1989). Perceived Usefulness, Perceived Ease of Use, and User Acceptance of Information Technology, *MIS Quarterly* (Vol. 13, pp. 319-340).
Davis, F. D., Bagozzi, R. P., & Warshaw, P. R. (1989). User Acceptance of Computer Technology: A Comparison of Two Theoretical Models. *Management Science, 35*, 982-1003.
Day, W. F. (1969). Radical Behaviorism in Reconciliation with Phenomenology. *Journal of the Experimental Analysis of Behavior, 12*(2), 315-328.
de Mooij, M. K., & de Mooij, M. (2011). *Consumer behavior and culture* (2 ed.). Thousand Oaks: Sage.
Delre, S. A., Jager, W., Bijmolt, T. H. A., & Janssen, M. A. (2010). Will It Spread or Not? The Effects of Social Influences and Network Topology on Innovation Diffusion. *Journal of Product Innovation Management, 27*, 267–282.
Denscombe, M. (2007). *The good research guide: for small-scale social research projects*. Berkshire: McGraw-Hill International,.
Dhar, R., & Wertenbroch, K. (2000). Consumer Choice Between Hedonic and Utilitarian Goods. *Journal of Marketing Research, 37*(1), 60-71.
Dickerson, M. D., & Gentry, J. W. (1983). Characteristics of Adopters and Non-Adopters of Home Computers. *The Journal of Consumer Research, 10*(2), 225-235.
DiClemente, D. F., & Hantula, D. A. (2003a). Applied Behavioral Economics and Consumer Choice. *Journal of Economic Psychology, 24*(589–602).
DiClemente, D. F., & Hantula, D. A. (2003b). Optimal Foraging Online: Increasing Sensitivity to Delay. *Psychology & Marketing, 20*, 785-810.
Directive2002/58/EC. (of 12 July 2002) concerning the processing of personal data and the protection of privacy in the electronic communications sector (Directive on privacy and electronic communications).

Doney, P. M., Cannon, J. P., & Mullen, M. R. (1998). Understanding the influence of National Culture on the Development of Trust *Academy of Management Review, 23*(3), 601-620.
Donovan, R. J., & Rossiter, J. R. (1982). Store Atmosphere: An Environmental Psychology Approach. *Journal of Retailing, 58*(1), 34-57.
Donovan, R. J., Rossiter, J. R., Marcoolyn, G., & Nesdale, A. (1994). Store Atmosphere and Purchasing Behavior. *Journal of Retailing, 70*(3), 283-294.
Dowling, G. R. (1999). Consumer Innovativeness. In P. E. Earl & S. Kemp (Eds.), *The Elgar companion to consumer research and economic psychology* (pp. 111-115). Cheltenham: Edwar Elgar Publishing.
Duncan, C. P. (1984). The Effect of Humor on Advertising Comprehension. *Advances in Consumer Research, 11*(1), 432-437.
Duncan, T., & Moriarty, S. E. (1998). A Communication-Based Marketing Model for Managing Relationships. *Journal of Marketing, 62*(2), 1-13.
East, R. (1993). Investment Decisions and the Theory of Planned Behaviour. *Journal of Economic Psychology, 14*, 337-375.
Eastlick, M. N., & Lotz, S. (1999). Profiling Potential Adopters and Non-adopters of an Interactive Electronic Shopping Medium. *International Journal of Retail & Distribution Management, 27*(6), 209-223.
Eastwood, G. (2009). *Key Trends in Converged Communications: Vendor Strategies, Market Development and Emerging Opportunities*: Business Insights.
Ebster, C., Wagner, U., & Neumueller, D. (2008). Children's Influences on In-store Purchases. *Journal of Retailing and Consumer Services, 16*(2), 145-154.
Engel, J., Blackwell, R. D., & Kegerreis, R. J. (1969). How Information is Used to Adopt an Innovation. *Journal of Advertising Research, 9*(4), 3-8.
Engel, J. F., Keggereis, R. J., & Blackwell, R. D. (1969). Word-of-mouth communication by the innovator, *Journal of Marketing* (Vol. 33).
Eroglu, A., Machleit, K. A., & Davis, L. M. (2003). Empirical Testing of a Model of Online Store Atmospherics and Shopper Responses. *Psychology & Marketing, 20*(2), 139-150.
Feick, L. F., & Price, L. L. (1987). The Market Maven: A Diffuser of Marketplace Information. *Journal of Marketing, 51*(1), 83–97.
Ferris, M. (2007). Insights on Mobile Advertising, Promotion, and Research. *Journal of Advertising Research, March*, 28-37.
Feyerabend, P. K. (1993). *Against Method* (3 ed.). London: Verso Books.
Field, A. P. (2009). *Discovering statistics using SPSS (and sex and drugs and rock 'n' roll)* (3 ed.). London: Sage Publications.
Figge, S. (2004). Situation-Dependent Services- A Challenge for Mobile Network Operators. *Journal of Business Research, 57*(12), 1416– 1422.
Figge, S., & Schrott, G. (2003). *3G "Ad" Work - 3G's Breakthrough with Mobile Advertising.* Paper presented at the Proceedings of the 8th International Workshop on Mobile Multimedia Communications, Munchen.
Fishbein, M., & Ajzen, I. (1975). *Belief, attitude, intention, and behavior: An introduction to theory and research*. Reading, MA: Addison-Wesley.
Fishbein, M., & Cappella, J. N. (2006). The Role of Theory in Developing Effective Health Communications. *Journal of Communication, 56*, S1–S17.
Fisher, R. J., & Price, L. L. (1992). An Investigation into the Social Context of Early Adoption Behavior. *Journal of Consumer Research, 19*(December), 477-486.
Fitzmaurice, J., & Comegys, C. (2006). Materialism and Social Consumption. *Journal of Marketing Theory and Practice, 14*(4), 287–299.

Flight, R. L., Allaway, A. W., Kim, W.-M., & D'Souza, G. (2011). A Study of Perceived Innovation Characteristics Across Cultures and Stages of Diffusion. *Journal of Marketing Theory and Practice, 19*(1), 109–125.
Flynn, L., & Goldsmith, R. E. (1993). A Validation of the Goldsmith and Hofacker Innovativeness Scale. *Educational and Psychological Measurement., 53*, 1004-1116.
Foxall, G. R. (1974). Aspects of the Application of Behavioural Science to Marketing. *European Journal of Marketing, 8*(3), 236-244.
Foxall, G. R. (1983). *Consumer choice*. London: Macmillan.
Foxall, G. R. (1986a). The Role of Radical Behaviorism in the Explanation of Consumer Choice. *Advances in Consumer Research, 13*, 187–191.
Foxall, G. R. (1986b). Theoretical Progress in Consumer Psychology: The Contribution of a Behavioral Analysis of Choice. *Journal of Economic Psychology, 7*, 293–314.
Foxall, G. R. (1987). Radical Behaviorism and Consumer Research: Theoretical Promise and Empirical Problems. *International Journal of Research in Marketing, 4*, 111-129.
Foxall, G. R. (1990). *Consumer Psychology in Behavioural Perspective*. London: Routledge.
Foxall, G. R. (1992). The Consumer Situation: An Integrative Model for Research in Marketing. *Journal of Marketing Management, 8*, 383-404.
Foxall, G. R. (1993). Consumer Behaviour as an Evolutionary Process. *European Journal of Marketing 27*, 46-57.
Foxall, G. R. (1994a). Behavior Analysis and Consumer Psychology. *Journal of Economic Psychology, 15*, 5-91.
Foxall, G. R. (1994b). Consumer Initiators: Adaptors and Innovators. *British Journal of Management 5*, S3-S12
Foxall, G. R. (1995a). Cognitive Styles of Consumer Initiators. *Technovation, 15*(5), 269-288.
Foxall, G. R. (1995b). Environment-Impacting Consumer Behavior: An Operant Analysis. *Advances in Consumer Research, 22*, 262-268.
Foxall, G. R. (1995c). Science and Interpretation in Consumer Research: A Radical Behaviourist Perspective. *European Journal of Marketing, 29*(9), 2-95.
Foxall, G. R. (1997a). *Marketing Psychology: The Paradigm in the Wings*. Basingstoke: Palgrave.
Foxall, G. R. (1997b). Affective Responses to Consumer Situations. *The International Review of Retail, Distribution and Consumer Research, 7*(3), 191-225.
Foxall, G. R. (1997c). The Emotional Texture of Consumer Environments: A Systematic Approach to Atmospherics. *Journal of Economic Psychology, 18*, 505-523.
Foxall, G. R. (1998). Intention versus Context in Consumer Psychology. *Journal of Marketing Management, 14*, 29-62.
Foxall, G. R. (1999a). The Behavioural Perspective Model: Consensibility and Consensuality. *European Journal of Marketing, 33*, 570-596.
Foxall, G. R. (1999b). The Marketing Firm. *Journal of Economic Psychology, 20*, 207-234.
Foxall, G. R. (1999c). Putting Consumer Behaviour in its Place: The Behavioural Perspective Model Research Programme. *International Journal of Marketing Research, June*, 133-158.

Foxall, G. R. (2002a). Behaviorism. In P. E. Earl & S. Kemp (Eds.), *The Elgar Companion to Consumer Research and Economic Psychology*.
Foxall, G. R. (2002b). Marketing's Attitude Problem- and How to Solve It. *Journal of Customer Behaviour, 1*, 19-48.
Foxall, G. R. (2007a). *Explaining consumer choice*. Basingstoke: Palgrave Macmillan.
Foxall, G. R. (2007b). Explaining Consumer Choice: Coming to Terms with Intentionality. *Behavioural Processes, 75*, 129-145.
Foxall, G. R. (2007c). Intentional Behaviorism. *Behavior and Philosophy, 35*, 1-55.
Foxall, G. R. (2010). Theoretical and Conceptual Advances in Consumer Behaviour Analysis. *Journal of Organizational Behavior Management, 30*, 92-109.
Foxall, G. R., & Bhate, S. (1993a). Cognitive Style and Personal Involvement as Explicators of Innovative Purchasing of "Healthy" Food Brands. *European Journal of Marketing, 27*(2), 5-16.
Foxall, G. R., & Bhate, S. (1993b). Cognitive Style and Use Innovativeness for Applications Software in Home Computing: Implications for New Product Strategy. *Technovation, 13*(5), 311-323.
Foxall, G. R., & Greenley, G. E. (1998). The Affective Structure of Consumer Situations. *Environment and Behavior, 30*(6), 781–798.
Foxall, G. R., & Greenley, G. E. (1999). Consumers' Emotional Responses to Service Environments. *Journal of Business Research, 46*, 149-158.
Foxall, G. R., & Greenley, G. E. (2000). Predicting and Explaining Responses to Consumer Environments: An Empirical Test and Theoretical Extension of the Behavioral Perspective Model. *The Service Industries Journal, 20*(2), 39-63.
Foxall, G. R., & Haskins, C. G. (1986). Cognitive Style and Consumer Innovativeness: An Empirical Test of Kirton's Adaption-Innovation Theory in the Context of Food Purchasing. *European Journal of Marketing, 20*(3/4), 63-80.
Foxall, G. R., & James, V. K. (2003). The Behavioral Ecology of Brand Choice: How and What Do Consumers Maximize? *Psychology and Marketing, 2*(9), 811–836.
Foxall, G. R., Oliveira-Castro, J. M., James, V. K., & Sigurdsson, V. (2006). Consumer Behavior Analysis and Social Marketing: The Case of Environmental Conservation. *Behavior and Social Issues, 15*, 101-124.
Foxall, G. R., Oliveira-Castro, J. M., & Schrezenmaier, T. C. (2004). The Behavioral Economics of Consumer Brand Choice: Patterns of Reinforcement and Utility Maximization. *Behavioural Processes, 66*, 235-260.
Foxall, G. R., & Yani-de-Soriano, M. (2005). Situational Influences on Consumers' Attitudes and Behavior. *Journal of Business Research, 58*, 518-525.
Frazier, P. A., Tix, A. P., & Barron, K. E. (2004). Testing Moderator and Mediator Effects in Counseling Psychology Research. *Journal of Counseling Psychology, 51*(1), 115-134.
Frey, J. H., & Fontana, A. (1991). The Group Interview in Social Research. *Social Science Journal, 28*(2).
Friedrich, R., Gröne, F., Hölbling, K., & Peterson, M. (2009). The March of Mobile Marketing: New Chances for Consumer Companies, New Opportunities for Mobile Operators. *Journal of Advertising Research, March*, 54-61.
Friman, P. C. (1998). Why Behavior Analysis Should Study Emotion: The Example of Anxiety. *Journal of Applied Behavior Analysis, 31*(1), 137-156.
Gao, L., Wheeler, S. C., & Shiv, B. (2009). The "Shaken Self": Product Choices as a Means of Restoring Self-View Confidence. *Journal of Consumer Research, 36*, 29-38.

Gatignon, H., Eliashberg, J., & Robertson, T. S. (1989). Modeling Multinational Diffusion Patterns: An Efficient Methodology. *Marketing Science, 8*(3), 231-247.
Gatignon, H., & Robertson, T. S. (1985). A Propositional Inventory for New Diffusion Research. *Journal of Consumer Research, 11*(March), 849-867.
Geiger, S. (2007). Exploring Night-Time Grocery Shopping Behaviour. *Journal of Retailing and Consumer Services, 14*, 24–34.
Gerbing, D. W., & Anderson, J. C. (1988). An Updated Paradigm for Scale Development Incorporating Unidimensionality and Its Assessment. *Journal of Marketing Research, 25*, 186-192.
Gielens, K., & Steenkamp, B. E. M. (2007). Drivers of Consumer Acceptance of New Packaged Goods: An Investigation Across Products and Countries. *International Journal of Research in Marketing, 24*(2), 97-111.
Gierl, H., & Huettl, V. (2010). Are Scarce Products Always More Attractive? The Interaction of Different Types of Scarcity Signals with Products' Suitability for Conspicuous Consumption. *International Journal of Research in Marketing, 27*, 225-235.
Givon, M. M., & Shapripa, Z. (1984). Response to Rating Scales: A Theoretical Model and its Application to the Number of Categories Problem. *Journal of Marketing Research, 21*, 410-419.
Glenn, S. S. (2004). Individual Behavior, Culture, and Social Change. *The Behavior Analyst, 27*(2), 133-151.
Godin, G., Valois, P., & Lepage, L. (1993). The Pattern of Influence of Perceived Behavioral Control upon Exercising Behavior: An Application of Ajzen's Theory of Planned Behavior. *Journal of Behavioral Medicine, 16*(1).
Godin, G., Valois, P., Shephard, R. J., & Desharnais, R. (1987). Prediction of Leisure-time Exercise Behavior: A Path Analysis (LISREL V) Model. *Journal of Behavioral Medicine, 10*, 145-158.
Goldenberg, J., Han, S., Lehmann, D. R., & Hong, J. W. (2009). The Role of Hubs in the Adoption Process. *Journal of Marketing, 73*(March), 1-13.
Goldenberg, J., & Oreg, S. (2007). Laggards in Disguise: Resistance to Adopt and the Leapfrogging Effect. *Technological Forecasting & Social Change, 74*, 1272–1281.
Goldsmith, R. E. (2001). Using the Domain Specific Innovativeness Scale to Identify Innovative Internet Consumers. *Internet Research: Electronic Networking Applications and Policy, 11*(2), 149-158.
Goldsmith, R. E., d'Hauteville, F., & Flynn, L. R. (1998). Theory and Measurement of Consumer innovativeness: A Transnational Evaluation. *European Journal of Marketing*, *32*(3/4), 340-353.
Goldsmith, R. E., & Flynn, L. R. (1992). Identifying Innovators in Consumer Product Markets. *European Journal of Marketing, 26*(12), 42-55.
Goldsmith, R. E., Flynn, L. R., & Goldsmith, E. B. (2003). Innovative Consumers and Market Mavens *Journal of Marketing Theory and Practice 11*(4), 54–64.
Goldsmith, R. E., & Foxall, G. R. (2003). The measurement of innovativeness. In L. V. Shavinina (Ed.), *The international handbook on innovation*: Elsevier.
Goldsmith, R. E., Freiden, J. B., & Eastman, J. K. (1995). The Generality/Specificity Issue in Consumer Innovativeness Research. *Technovation, 15*(10), 601-612.
Goldsmith, R. E., & Hofacker, C. F. (1991). Measuring Consumer Innovativeness. *Journal of the Academy of Marketing Science, 19*(3), 209-221.

Goldsmiths, R. E. (1999). The Personalised Marketplace: Beyond the 4Ps. *Marketing Intelligence and Planning, 17*(4), 178-185.
Gorn, G. J. (1982). The Effects of Music in Advertising on Choice Behavior: A Classical Conditioning Approach *Journal of Marketing, 46*(1), 94-101.
Gorn, G. J., Chadtopadhyay, A., Yi, T., & Dahl, D. W. (1997). Effects of Color as an Executional Cue on Advertising: They're in the Shade. *Management Science, 43*(10), 1387-1400.
Götze, E., Prange, C., & Uhrovska, I. (2009). Children's Impact on Innovation Decision Making: A Diary Study. *European Journal of Marketing, 43*(1/2), 264-295.
Granovetter, M., & Soong, R. (1986). Threshold Models of Interpersonal Effects in Consumer Demand. *Journal of Economic Behavior and Organization, 7*, 83-89.
Grant, I., & O'Donohoe, S. (2007). Why Young Consumers Are Not Open to Mobile Marketing Communication. *International Journal of Advertising, 26*(2), 223-246.
Grass, R. C., & Wallace, W. H. (1969). Satiation Effects of TV Commercials. *Journal of Advertising Research, 9*, 3-8.
Greene, F. B., Bailey, J. S., & Barber, F. (1981). An Analysis and Reduction of Disruptive Behavior on School Buses. *Journal of Applied Behavior Analysis, 14*(2), 177-192.
Griskevicius, V., Goldstein, N. J., Mortensen, C. R., Sundie, J. M., Cialdini, R. B., & Kenrick, D. T. (2009). Fear and Loving in Las Vegas: Evolution, Emotion, and Persuasion. *Journal of Marketing Research (JMR), 46*(3), 384-395.
Grossman, R. P. (1997). Co-branding in Advertising: Developing Effective Associations. *Journal of Product & Brand Management, 6*(3), 191-201.
Grossman, R. P., & Till, B. D. (1998). The Persistence of Classically Conditioned Brand Attitudes. *Journal of Advertising, 27*(1), 23-31.
Guba, E. G., & Lincoln, Y. S. (1994). Competing Paradigms in Qualitative Research, *Handbook of Qualitative Research* (pp. 105-117): Sage Publications.
Gupta, S., & Kim, H.-W. (2010). Value-Driven Internet Shopping: The Mental Accounting Theory Perspective. *Psychology & Marketing, 27*(1), 13-35.
Hadar, L., & Sood, S. (2009). Comparative Knowledge and Consumer Choice. *Advances in Consumer Research - North American Conference Proceedings, 36*, 1008-1009.
Haghirian, P., Madlberger, M., & Tanuskova, A. (2005). *Increasing Advertising Value of Mobile Marketing - An Empirical Study of Antecedents.* Paper presented at the Proceedings of the 38th Hawaii International Conference on System Sciences, Hawaii.
Hair, J. F., Anderson, R. E., Tatham, R. L., & Black, W. (1995). *Multivariate analysis* (4th ed.). Upper Saddle River, NJ: Prentice Hall.
Hammond, S. (2006). Using psychometric Tests. In G. M. Breakwell & S. Hammond & S. Fife-Schaw & J. A. Chris (Eds.), *Research Methods in Psychology* (3 ed.). London: Sage Publications.
Han, S. P., & Shavitt, S. (1994). Persuasion and Culture: Advertising Appeals in Individualistic and Collectivistic Societies. *Journal of Experimental Social Psychology, 30*, 326-350.
Hanley, M., & Becker, M. (2008). Cell Phone Usage and Advertising Acceptance among College Students: A Four-Year Analysis. *International Journal of Mobile Marketing, 3*(1), 67-80.

Harrell, G. D., Huh, M. D., & Anderson, J. C. (1980). Path Analysis of Buyer Behavior Under Conditions of Crowding. *Journal of Marketing Research, 17*(1), 45-51.
Harris, K., Baron, S., & Parker, C. (2000). Understanding the Consumer Experience : It's 'Good To Talk'. *Journal of Marketing Management, 16*, 111-127.
Harris, M. (1979). *Cultural materialism: The struggle for a science of culture*. New York: Random House.
Harris, P., Rettie, R., & Kwan, C. C. (2005). Adoption and Usage of M-Commerce: A Cross-Cultural Comparison of Hong Kong and the United Kingdom. *Journal of Electronic Commerce Research, 6*(3), 210–225.
Hatcher, A. (1994). *A step-by-step approach to using the SAS system for factor analysis and structural equation modeling*: SAS Publishing.
Havlena, W. J., & Holbrook, M. B. (1986). The Varieties of Consumption Experience: Comparing Two Typologies of Emotion in Consumer Behavior. *Journal of Consumer Research, 13*(December), 394-404.
Hedges, A. (1985). Group Interviewing. In A. Walker (Ed.), *Applied qualitative research*. Aldershot: Gower.
Heinonen, K., & Strandvik, T. (2007). Consumer Responsiveness to Mobile Marketing. *International Journal of Mobile Communications, 5*(6), 603-617.
Heller, N. E. (2006). Growth of Mobile Multimedia Advertising. *International Journal of Mobile Marketing, 1*(1), 41-49.
Hergenhahn, B. R. (2005). *An Introduction to the History of Psychology* (5 ed.). London: Thomson Wadsworth.
Herrington, J. D., & Capella, L. M. (1996). Effects of Music in Service Environments: A Field Study. *Journal of Services Marketing, 10*(2), 26-41.
Hini, D., Gendall, P., & Kearns, Z. (1995). The Link between Environmental Attitudes and Behaviour. *Marketing Bulletin, 6*, 21-33.
Hinkin, T. R. (1998). A Brief Tutorial on the Development of Measures for Use in Survey Questionnaires. *Organizational Research Methods, 1*(1), 104-121.
Hirschman, E. C. (1980). Innovativeness, Novelty Seeking, and Consumer Creativity. *Journal of Consumer Research, 7*(December), 283-295.
Hirschman, E. C. (1986). Humanistic Inquiry in Marketing Research: Philosophy, Method, and Criteria. *Journal of Marketing Research, XXIII* (August), 237-249.
Hirschman, E. C., & Holbrook, M. B. (1982). Hedonic Consumption: Emerging Concepts, Methods, and Propositions, *Journal of Marketing* (Vol. 46, pp. 92-101).
Hirunyawipada, T., & Paswan, A. K. (2006). Consumer Innovativeness and Perceived Risk: Implications for High Technology Product Adoption. *Journal of Consumer Marketing, 23*(4), 182–198.
Hofstede, G. (1991). *Cultures and organizations: software of the mind: Intercultural cooperation and its importance for survival*. Cambridge, UK: McGraw-Hill.
Holak, S. L., & Lehmann, D. R. (1990). Purchase Intentions and the Dimensions of Innovations: An Exploratory Model, *Journal of Product Innovation Management* (Vol. 7).
Holden, M. T., & Lynch, P. (2004). Choosing the Appropriate Methodolody: Understanding Research Philosophy. *The Marketing Review, 4*, 397-409.
Holt, D. B. (1995). How Consumers Consume: A Typology of Consumption Practices. *Journal of Consumer Research, 22*(June), 1-16.

Hong, S.-H., & Tam, K. Y. (2006). Understanding the Adoption of Multipurpose Information Appliances: The Case of Mobile Data Services. *Information Systems Research, 17*(2), 162–179.
Hong, S.-J., Thong, J. Y. L., Moon, J.-Y., & Tam, K.-Y. (2008). Understanding the Behavior of Mobile Data Services Consumers. *Information Systems Frontiers, 10*, 431–445.
Horne, P. J., & Lowe, C. F. (1993). Determinants of Human performance on Concurrent Schedules. *Journal of the Experimental Analysis of Behavior, 59*, 29–60.
Hu, L., & Bentler, P. (1999). Cutoff Criteria for Fit Indices in Covariance Structure Analysis: Conventional Criteria versus New Alternatives. *Structural Equation Modeling, 6*, 1–55.
Hudson, L. A., & Ozanne, J. L. (1988). Alternative Ways of Seeking Knowledge in Consumer Research. *Journal of Consumer Research, 14*(4), 508-521.
Hughes, D., & DuMont, K. (1993). Using Focus Groups to Facilitate Culturally Anchored Research. *American Journal of Community Psychology, 21*(6), 775-806.
Hunt, S. D. (1991). Positivism and Paradigm Dominance in Consumer Research: Toward Critical Pluralism and Rapprochement. *Journal of Consumer Research, 18*, 32-44.
Hunt, S. D. (1993). Objectivity in Marketing Theory. *Journal of Marketing, 57*(2), 76-91.
Hunt, S. D. (2003). *Controversy in marketing theory: For reason, realism, truth and objectivity*: Armonk, M.E. Sharpe.
Hurt, H. T., Joseph, K., & Cook, C. D. (1977). Scales for the Measurement of Innovativeness. *Human Communication Research, 4*(Fall), 58-65.
Ilieva, J., Baron, S., & Healey, N. M. (2002). Online Surveys in Marketing Research: Pros and Cons. *International Journal of Market Research, 44*(3), 361-376.
Im, S., Bayus, B. L., & Mason, C. H. (2003). An Empirical Study of Innate Consumer Innovativeness, Personal Characteristics, and New-Product Adoption Behavior. *Journal of the Academy of Marketing Science, 31*(Winter), 61–73.
Im, S., Mason, C. H., & Houston, M. B. (2007). Does Innate Consumer Innovativeness Relate to New Product/Service Adoption Behavior? The Intervening Role of Social Learning via Vicarious Innovativeness. *Journal of the Academy of Marketing Science, 35*, 63–75.
Inman, J. J., & McAlister, L. (1994). Do Coupon Expiration Dates Affect Consumer Behavior? *Journal of Marketing Research, 31*(3), 423-428.
Iyengar, R., Van den Bulte, C., & Valente, T. W. (2010). Opinion Leadership and Social Contagion in New Product Diffusion *Marketing Science, published online before print December 10, 2010, DOI:10.1287/mksc.1100.0614*.
Jackson, T. (2002). *International HRM: A cross-cultural approach* London: Sage.
Jacobs, L., Samli, A. C., & Jedlik, T. (2001). The Nightmare of International Product Piracy: Exploring Defensive Strategies. *Industrial Marketing Management, 30*, 499-509.
Janiszewski, C., & Warlop, L. (1993). The Influence of Classical Conditioning Procedures on Subsequent Attention to the Conditioned Brand. *Journal of Consumer Research, 20*, 171–189.
Javenpaa, S. L., & Tractinsky, N. (1999). Consumer Trust in an Internet Store: A Cross-Cultural Validation. *Journal of Computer-Mediated Communication, 5*(2), 1-33.

Javenpaa, S. L., Tractinsky, N., & Vitale, M. (2000). Consumer Trust in an Internet Store. *Information Technology and Management, 1*, 45-71.
Jayawardhena, C., Kuckertz, A., Karjaluoto, H., & Kautonen, T. (2009). Antecedents to Permission Based Mobile Marketing: An Initial Examination. *European Journal of Marketing, 43*(3/4), 473-499.
Jelassi, T., & Enders, A. (2006). Mobile Advertising: A European Perspective. In S. Barnes & E. Scornavacca (Eds.), *Unwired Business: Cases in Mobile Business*. Hershey: Idea Group Inc.
John, O. P., & Soto, C. J. (2007). *Handbook of Research Methods in Personality Psychology* New York: Guilford Press.
Johnston, L. (2002). Behavioral Mimicry and Stigmatization. *Social Cognition, 20*, 18-35.
Jones, J. M., & Ritz, C. J. (1991). Incorporating Distribution into New Product Diffusion Models. *International Journal of Research in Marketing, 8*, 91-112.
Kacen, J. J., & Lee, J. A. (2002). The Influence of Culture on Consumer Impulsive Buying Behavior. *Journal of Consumer Psychology, 12*(2), 163–176.
Kalwani, M. U., & Silk, A. J. (1982). On the Reliability and Predictive Validity of Purchase Intention Measures. *Marketing Science, 1*, 243–286.
Kaplan, H., & Hill, K. (1992). The evolutionary ecology of food acquisition. In E. A. Smith & B. Winterhalder (Eds.), *Evolutionary ecology and human behavior* (pp. 167-201). New York: Aldine de Gruyter.
Karjaluoto, H., Jayawardhena, C., Kuckertz, A., & Kautonen, T. (2008). Sources of Trust in Permission-Based Marketing: A Cross-Country Study Comparison. In T. Kautonen & H. Karjaluoto (Eds.), *Trust and the New Technologies: Marketing and Management on the Internet and Mobile Media* (pp. 165-181). Cheltenham: Edward Elgar Publishing.
Karjaluoto, H., Lehto, H., Leppäniemi, M., & Jayawardhena, C. (2008, May, 27-30). *Customers' Intention to Engage in Permission based Mobile Marketing Communications.* Paper presented at the Proceeding of the European Marketing Academy Conference, Brighton, UK.
Kautonen, T., Karjaluoto, H., Jayawardhena, C., & Kuckertz, A. (2007). Permission-Based Mobile Marketing and Sources of Trust in Selected European Markets. *Journal of Systems and Information Technology, 11*, 104-123.
Kavassalis, P., Spyropoulou, N., Drossos, D., Mitrokostas, E., Gikas, G., & Hatzistamatiou, A. (2003). Mobile Permission Marketing: Framing the Market Inquiry, *International Journal of Electronic Commerce* (Vol. 8, pp. 55-79).
Kerlinger, E. (1986). *Foundations of behavioral research* (3rd ed.). New York: Holt, Rinehart & Winston.
Khalifa, M., & Ning Shen, K. (2008). Drivers for Transactional B2C M-Commerce Adoption : Extended Theory of Planned Behavior. *Journal of Computer Information Systems, 48*(3), 111-117.
Kim, H.-W., Chan, H. C., & Gupta, S. (2007). Value-based Adoption of Mobile Internet: An empirical investigation. *Decision Support Systems, 43*, 111 –126.
Kim, S. S., Malhotra, N. K., & Narasimhan, K. (2005). Research Note: Two Competing Perspectives on Automatic Use: A Theoretical and Empirical Comparison. *Information Systems Research, 16*(4), 418–432.
Kirton, M. J. (1989). *Adaptors and Innovators: Styles of creativity and problem solving*. London: Routledge.

Kitzinger, J. (1994). The Methodology of Focus Groups: The Importance of Interaction between Research Participants. *Sociology of Health & Illness, 16*(1), 103-121.
Kitzinger, J. (1995). Qualitative Research: Introducing Focus Groups. *BMJ, 311*(July), 299-302.
Kleijnen, M., Lee, N., & Wetzels, M. (2009). An Exploration of Consumer Resistance to Innovation and its Antecedents. *Journal of Economic Psychology, 30*(344–357).
Kleine, R. E. I., Kleine, S. S., & Kernan, J. B. (1993). Mundane Consumption and the Self: A Social-Identity Perspective. *Journal of Consumer Psychology, 2*(3), 209-235.
Koernig, S. K. (2003). E-Scapes: The Electronic Physical Environment and Service Tangibility. *Psychology & Marketing, 20*(2), 151-167.
Koivumaki, T., Ristola, A., & Kesti, M. (2006). Predicting Consumer Acceptance in Mobile Services: Empirical Evidence from an Experimental End User Environment. *International Journal of Mobile Communications, 4*(4), 4.
Koivumaki, T., Ristola, A., & Kesti, M. (2008). The Effects of Information Quality of Mobile Information Services on User Satisfaction and Service Acceptance – Empirical Evidence from Finland. *Behaviour & Information Technology, 27*(5), 375–385.
Kolsaker, A., & Drakatos, N. (2009). Mobile Advertising: The Influence of Emotional Attachment to Mobile Devices on Consumer Receptiveness. *Journal of Marketing Communications, 15*(4), 267–280.
Krishnamurthy, S. (2001). Comprehensive Analysis of Permission Marketing, *Journal of Computer Mediated Communication* (Vol. 6).
Krosnick, J. A., & Berent, M. K. (1993). Comparisons of Party Identification and Policy Preferences: The Impact of Survey Question Format. *American Journal of Political Science, 37*, 941-964.
Krueger, R. A. (1988). *Focus groups: A practical guide for applied research*. Newbury Park, CA: Sage.
Krueger, R. A. (1994). *Focus groups: A practical guide for applied research*: Sage.
Krueger, R. A., & Casey, M. A. (2001). Designing and Conducting Focus Group Interviews. In R. A. Krueger & M. A. Casey & J. Donner & S. Kirsch & J. N. Maack (Eds.), *Social Analysis: Selected Tools and Techniques* (Vol. 36, pp. 4-23): Social Development Papers.
Kuester, S., & Hess, S. (2009). How to Overcome Customers' Adoption Barriers? *Advances in Consumer Research, 36*, 783-784.
Kulviwat, S., Bruner, G. C., & Al-Shuridah, O. (2009). The Role of Social Influence on Adoption of High Tech Innovations: The Moderating Effect of Public/Private Consumption. *Journal of Business Research, 62*(7), 706-712.
Kumar, V., Ganesh, J., & Echambadi, R. (1998). Cross-National Diffusion Research: What Do We Know and How Certain Are We? *Journal of Product Innovation Management, 15*, 255–268.
Kunkel, J. H., & Berry, L. L. (1968). A Behavioral Conception of Retail Image. *Journal of Marketing, 32*, 45–52.
Lafferty, B. A., Goldsmith, R. E., & Flynn, L. R. (2005). Are Innovators Inluences by Endorser Expertise in an Advertisement When Evaluating a High Technology Product? *Journal of Marketing Theory and Practice, 13*(3), 32-48.
Lai, A. W. (1991). Consumption Situation and Product Knowledge in the Adoption of a New Product. *European Journal of Marketing, 25*(10), 55 - 67.

Lammers, B. H. (1991). The Effect of Free Samples on Immediate Consumer Purchase. *Journal of Consumer Marketing, 8*(2), 31-37.
Landis, J. R., & Koch, G. G. (1977). The Measurement of Observer Agreement for Categorical Data. *Biometrics, 33*, 159 –174.
Lascu, D. N., & Zinkhan, G. (1999). Consumer Conformity: Review and Applications for Marketing Theory and Practice. *Journal of Marketing Theory and Practice, 7*(3), 1−12.
Laszlo, J. (2009). The New Unwired World: An IAB Status Report on Mobile Advertising. *Journal of Advertising Research, 49*(1), 27-43.
Leahey, T. H. (1987). *A history of psychology: Main currents in psychological thought* (2 ed.). Englewood Cliffs, NJ: Prentice-Hall.
Leavitt, C., ., & Walton, J. (1975). Development of a Scale for Innovativeness. *Advances in Consumer Research, 2*(1), 545-554.
Lecas, J.-C. (2006). Behaviourism and the Mechanization of the Mind. *C-R Biologies, 329*, 386-397.
Lee, A. S. (1991). Integrating Positivist and Interpretive Approaches to Organisational Research. *Organization Science, 2*(4), 342-365.
Lee, I., Kim, J., & Kim, J. (2005). Use Contexts for the Mobile Internet: A Longitudinal Study Monitoring Actual Use of Mobile Internet Services. *International Journal of Human-Computer Interaction, 18*(3), 269-292.
Lee, T., & Jun, J. (2007). Contextual perceived value?: Investigating the role of contextual marketing for customer relationship management in a mobile commerce context. *Business Process Management Journal, 13*(6), 798-814.
Lee, Y., Kim, J., Lee, I., & Kim, H. (2002). A Cross-Cultural Study on the Value Structure of Mobile Internet Usage: Comparison between Korea and Japan. *Journal of Electronic Commerce Research, 3*(4).
Leek, S., & Christodoulides, G. (2009). Next-Generation Mobile Marketing: How Young Consumers React to Bluetooth-Enabled Advertising. *Journal of Advertising Research, 49*(1), 44-53.
Leek, S., Maddock, S., & Foxall, G. R. (2000). Situational Determinants of Fish Consumption. *British Food Journal, 102*(1), 18-39.
Leigland, S. (1999). Pragmatism, Science and Society: A Review of Richard Rorty's *Objectivity, Relativism and Truth: Philosophical Papers Journal of the Experimental Analysis of Behavior, 1*(71), 483-500.
Leigland, S. (2010). Functions of Research in Radical Behaviorism for the Further Development of Behavior Analysis. *Behavior Analyst, 33*(2), 207-222.
Leonard-Barton, D. (1985). Experts as Negative Opinion Leaders in the Diffusion of a Technological Innovation. *Journal of Consumer Research, 11*(March), 914-926.
Lerner, J. S., & Keltner, D. (2000). Beyond Valence: Toward a Model of Emotion-Specific Influences on Judgement and Choice. *Cognition and Emotion, 14*(4), 473-493.
Lerner, J. S., Small, D. A., & Loewenstein, G. (2004). Heart Strings and Purse Strings Carryover Effects of Emotions on Economic Decisions. *Psychological Science, 15*(5), 337-341.
Lewis, D., & Bridger, D. (2001). *The soul of the new consumer: Authenticity - what we buy and why in the new economy*. London: Nicholas Brealey Publishing.
Li, G., J-T., Kim, J.-O., & Lee, S. Y. (2009). An Empirical Examination of Perceived Retail Crowding, Emotions, and Retail Outcomes. *The Service Industries Journal, 29*(5), 635-652.

Li, R., Glass, S., & Records, H. (2008). The Influence of Gender on New Technology Adoption and Use-Mobile Commerce. *Journal of Internet Commerce, 7*(2), 270-289.

Lim, E. A. C., & Ang, S. H. (2008). Hedonic vs. Utilitarian Consumption: A Cross-Cultural Perspective Based on Cultural Conditioning. *Journal of Business Research, 61,* 225–232.

Lo, L. (1994). Exploring Teenage Shoplifting Behavior : A Choice and Constraint Approach. *Environment and Behavior, 26*, 613-639.

Logue, A. W., Forzano, L. B., & Tobin, H. (1992). Independence of Reinforcer Amount and Delay: The Generalized Matching Law and Self-Control in Humans. . *Learning and Motivation, 23,* 326–342.

Logue, A. W., Pena-Correal, T. E., Rodriguez, M. L., & Kabela, E. (1986). Self-control in Adult Humans: Variation in Positive Reinforcer Amount and Delay. *Journal of the Experimental Analysis of Behavior, 46*, 159–173.

Low, P., & Freeman, I. (2007). Fashion marketing to women in Kazakhstan. *Journal of Fashion Marketing and Management Science, 11*(1), 41-55.

Lozanoa, L. M., García-Cuetob, E., & Muñizb, J. (2008). Effect of the Number of Response Categories on the Reliability and Validity of Rating Scales *Methodology: European Journal of Research Methods for the Behavioral and Social Sciences, 4*(2), 73-79.

Lunsford, T. K., & Lunsford, B. R. (1995). The Research Sample: Part I: Sampling. *ournal of Prosthetics and Orthotics, 7*(3), 105–112.

Luo, X. (2005). How Does Shopping with Others Influence Impulsive Purchasing? *Journal of Consumer Psychology, 15*(4), 288-294.

Lutz, R. J., & Kakkar, P. (1975). The Psychological Situation as a Determinant of Consumer Behavior. *Advances in Consumer Research, 2*, 439-353.

Mahajan, V., Muller, E., & Bass, F. M. (1990). New Product Diffusion Models in Marketing: A Review and Directions for Research. *Journal of Marketing, 54*(January), 1-26.

Mahajan, V., Muller, E., & Srivastava, R. K. (1990). Determination of Adopter Categories by Using Innovation Diffusion Models. *Journal of Marketing Research, 27*(February), 37-50.

Maheswaran, D., & Shavitt, S. (2000). Issues and New Directions in Global Consumer Psychology. *Journal of Consumer Psychology, 9*(2), 59-66.

Malagodi, E. F. (1986). On Radicalizing Behaviorism: A Call for Cultural Analysis. *The Behavior Analyst, 9*(1), 1-17.

Malhotra, N. K., & Birks, D. F. (2006). *Marketing Research: An Applied Approach* (3 European ed.). Essex: Pearson Education.

Mallat, N., Rossi, M., Tuunainen, V. K., & Oorni, A. (2009). The Impact of Use Context on Mobile Services Acceptance: The Case of Mobile Ticketing. *Information & Management, 46*(3), 190-195.

Malone, J. C. J., & Cruchon, N. M. (2001). Radical Behaviorism and the Rest of Psychology: A Review/Precis of Skinner's About Behaviorism. *Behavior and Philosophy, 29,* 31-57.

Manchanda, P., Xie, Y., & Youn, N. (2008). The Role of Targeted Communication and Contagion in Product Adoption. *Marketing Science, 27*(6), 961–976.

Mangleburg, M. F., Doney, P. M., & Bristol, T. (2004). Shopping with Friends and Teens' Susceptibility to Peer Influence. *Journal of Retailing, 80,* 101-116.

Mann, C., & Stewart, F. (2000). *Internet communication and qualitative research: a handbook for researching online*. London: Sage Publications Ltd.

Manning, K. C., Bearden, W. O., & Madden, T. J. (1995). Consumer Innovativeness and the Adoption Process. *Journal of Consumer Psychology, 4*(4), 329-345.
Mattila, A. S., & Wirtz, J. (2001). Congruency of Scent and Music as a Driver of In-Store Evaluations and Behavior. *Journal of Retailing, 77*(2), 273-289.
McGoldrick, P. J., Betts, E. J., & Keeling, K. A. (1999). Antecedents of Spontaneous Buying Behavior During Temporary Markdowns. *Advances in Consumer Research, 26*, 26-33.
McGrath, M. A., & Otnes, C. (1995). Unacquainted Interact in the Influencers: When Strangers Interact in the Retail Setting. *Journal of Business Research, 32*, 261-272.
McGregor, S. L. T., & Murnane, J. A. (2010). Paradigm, Methodology and Method: Intellectual Integrity in Consumer Scholarship. *International Journal of Consumer Studies, 34*, 419-427.
McKenna, R. (1995). Real-Time Marketing. *Harvard Business Review, 73*(4), 87-95.
Mehrabian, A., & Russell, J. A. (1974). *An Approach to Environmental Psychology*. Cambridge, MA: MIT Press.
Menon, S., & Kahn, B. (2002). Cross-Category Effects of Induced Arousal and Pleasure on the Internet Shopping Experience. *Journal of Retailing, 78*, 31-40.
Menon, S., & Kahn, B. E. (1995). The Impact of Context on Variety Seeking in Product Choices. *Journal of Consumer Research, 22*(3), 285-295.
Merisavo, M., Kajalo, S., Karjaluoto, H., Virtanen, V., Salmenkivi, S., Raulas, M., & Leppaniemi, M. (2007). An Empirical Study of the Drivers of Consumer Acceptance of Mobile Advertising. *Journal of Interactive Advertising, 7*(2), 1.
Mesak, H. I. (1996). Incorporating Price, Advertising and Distribution in Diffusion Models of Innovation: Some Theoretical and Empirical Results. *Computers and Operations Research, 27*(10), 1007-1023.
Michaut. (2009). Matching Product Newness to Consumer Exploratory Buying Behavior: Strategies for Effective New Product Launch. *Advances in Consumer Research, 36*, 1048-1049.
Michon, R., Chebat, J.-C., & Turley, L. W. (2005). Mall Atmospherics: The Interaction Effects of the Mall Environment on Shopping Behavior. *Journal of Business Research, 58*, 576-583.
Midgley, D. F. (1977). *Innovation and New Product Marketing*. New York: John Wiley.
Midgley, D. F., & Dowling, G. R. (1978). Innovativeness: The Concept and its Measurement. *Journal of Consumer Research, 4*, 229-242.
Miller, K. E., & Ginter, J. L. (1979). An Investigation of Situational Variation in Brand Choice Behavior and Attitude. *Journal of Marketing Research, 16*(1), 111-123.
Milliman, R. E. (1982). Using Background Music to Affect the Behavior of Supermarket Shoppers *Journal of Marketing, 46*(3), 86-91.
Milliman, R. E. (1986). The Influence of Background Music on the Behavior of Restaurant Patrons. *Journal of Consumer Research, 13*(2), 286-289.
Millward, L. J. (2006). Focus Groups. In G. M. Breakwell & S. Hammond & S. Fife-Schaw & J. A. Chris (Eds.), *Research methods in psychology* (3 ed.). London: Sage Publications.
Mintel. (2010). *Mobile Phones and Networks - Re-igniting The Replacement Cycle*
Moisander, J., & Valtonen, A. (2006). *Qualitative marketing research: a cultural approach*. London: Sage.

Montero, D. (1981). The Japanese Americans: Changing Patterns of Assimilation Over Three Generations. *American Sociological Review, 46*(6), 829-839.
Moore, G. A. (1999). *Crossing the Chasm* (2nd ed.). Oxford: Capstone Publishing.
Moore, G. C., & Benbasat, I. (1991). Development of an Instrument to Measure the Perceptions of Adopting an Information Technology Innovation. *Information Systems Research, 2*(3), 192-222.
Moore, J. (1995). Radical Behaviorism and the Subjective-Objective Distinction. *The Behavior Analyst, 18*(1), 33-49.
Moore, J. (2008). *Conceptual foundations of radical behaviorism*. Cornwall-on-Hudson, NY: Sloan.
Moore, J. (2010). Philosophy of Science, with Special Consideration Given to Behaviorism as the Philosophy of the Science of Behavior. *The Psychological Record, 60*, 137–150.
Moreau, C. P., Lehmann, D. R., & Markman, A. B. (2001). Entrenched Knowledge Structures and Consumer Response to New Products. *Journal of Marketing Research, 38*(February), 14-29.
Moreau, C. P., Markman, A. B., & Lehmann, D. R. (2001). "What Is It?" Categorization Flexibility and Consumers' Responses to Really New Products. *Journal of Consumer Research, 27*(489-498).
Morgan, C. D., & Murray, H. A. (1938). Thematic Apperception Test. In H. A. Murray (Ed.), *Explorations in personality*. New York: Oxford University Press.
Morgan, D. L. (1997). *Focus groups as qualitative research* (2 ed.). London: Sage.
Morgan, L. M. (1996). Focus Groups. *Annual Review of Sociology, 22*, 129-152.
Morgan, W. G. (2003). Origin and History of the "Series B" and "Series C" TAT Pictures. *Journal of Personality Assessment, 81*(1), 133–148.
Morris, E. K. (1993). Behavior Analysis and Mechanism: One Is Not the Other. *The Behavior Analyst, 16*(1), 25-43.
Mort, G. S., & Drennan, J. (2007). Mobile Communications: A Study of Factors Influencing Consumer Use of M-Services. *Journal of Advertising Research, 47*(3), 302-312.
Morwitz, V. G. (1997). Why Consumers Don't Always Accurately Predict Their Own Future Behavior. *Marketing Letters, 8* (1), 57–70.
Morwitz, V. G., & Sun, B. (2010). Stated Intentions and Purchase Behavior: A Unified Model. *International Journal of Research in Marketing, 27*(4), 356-366
Mowrer, O. H. (1960). *Learning Theory and Behavior*. New York: Wiley.
Moxley, B. (1982). Graphics for Three-Term Contingencies. *The Behavior Analyst, 5*(1), 45-51.
Mudd, S. (1990). The Place of Innovativeness in Models of the Adoption Process: An Integrative Review. *Technovation, 10*(2), 119-136.
Muk, A. (2007a). Consumers' Intentions to Opt in to SMS Advertising: A Cross-National Study of Young Americans and Koreans. *International Journal of Advertising, 26*(2), 177-198.
Muk, A. (2007b). Cultural Influences on Adoption of SMS Advertising: A Study of American and Taiwanese Consumers. *Journal of Targeting, Measurement & Analysis for Marketing, 16*(1), 39-47.
Mullen, P. D., Hersey, J. C., & Iverson, D. C. (1987). Health Behavior Models Compared *Social Science & Medicine, 24*(11), 973-981

Mummalaneni, V. (2005). An Empirical Investigation of Web Site Characteristics, Consumer Emotional States and On-line Shopping Behaviors. *Journal of Business Research, 58*, 526– 532.
Munnukka, J. (2007). Characteristics of Early Adopters in Mobile Communications Markets. *Marketing Intelligence & Planning, 25*(7), 719-731.
Nelson, A. I., Bromley, R. D. F., & Thomas, C. J. (1996). The Geography of Shoplifting in a British City: Evidence from Cardiff. *Geoforum, 27*(3), 409-423.
Ngai, E. W. T., & Gunasekaran, A. (2007). A Review for Mobile Commerce Research and Applications. *Decision Support Systems, 43*(1), 3-15.
Nicholson, M. (2005). *Consumer Psychology as the Behaviourist Views It: An Operant Analysis of Consumer Channel Choice.* Unpublished PhD thesis, University of Durham, Durham.
Nicholson, M., Clarke, I., & Blakemore, M. (2002). One Brand, Three Ways to Shop' :Situational Variables and Multichannel Consumer Behaviour. *International Review of Retail, Distribution and Consumer Research 12*(2), 131-148.
Nicholson, M., & Xiao, H. (2007). Darwin's Ghost: Evolutionary Psychology Consumer Behaviour Analysis, *available at: http://ssrn.com/abstract=1014014 (accessed on 26 March 2011)*.
Nord, W. R., & Peter, J. P. (1980). A Behavior Modification Perspective on Marketing. *Journal of Marketing, 44*, 36-47.
Norman, P., & Smith, L. (1995). The Theory of Planned Behaviour and Exercise: An Investigation into the Role of Prior Behaviour, Behavioural Intentions and Attitude Variability. *European Journal of Social Psychology, 25*(4), 403–415.
North, A. C., Hargreaves, D. J., & McKendrick, J. (1999). The Influence of In-Store Music on Wine Selections. *Journal of Applied Psychology, 84*(2), 271-276.
Nunnally, J. C. (1978). *Psychometric theory* (2nd ed.). New York: McGraw-Hill.
Nysveen, H., & Pedersen, P. E. (2003, 9-11 June). *Usefulness and Self-Expressiveness: Extending TAM to Explain the Adoption of a Mobile Parking Service.* Paper presented at the Proceeding of the 16th Bled eCommerce Conference, Bled, Slovenia.
Nysveen, H., Pedersen, P. E., & Thorbjørnsen, H. (2005a). Explaining Intention to Use Mobile Chat Services: Moderating Effects of Gender. *Journal of Consumer Marketing, 22*(5), 247-256.
Nysveen, H., Pedersen, P. E., & Thorbjørnsen, H. (2005b). Intentions to Use Mobile Services: Antecedents and Cross-Service Comparisons. *Journal of the Academy of Marketing Science, 33*(3), 330-346.
O'Donohue, W., & Smith, L. D. (1992). Philosophical and Psychological Epistemologies in Behaviorism and Behavior Therapy. *Behavior Therapy, 23*, 173-194.
O'Brien, K. (1993). Improving Survey Questionnaires through focus groups. In D. L. Morgan (Ed.), *Successful focus groups: Advancing the state of the art* (pp. 105-117). Thousand Oaks, CA: Sage Publications.
O'Donohue, W. T., & Kitchener, R. (1999). *Handbook of Behaviourism*: Academic Press Inc.
Okazaki, S. (2004). How Do Japanese Consumers Perceive Wireless Ads? A Multivariate Analysis. *International Journal of Advertising, 23*, 429-454.

Okazaki, S. (2008). Determinant Factors of Mobile-Based Word-of-Mouth Campaign Referral among Japanese Adolescents. *Psychology & Marketing, 25*(8), 714-731.
Okazaki, S. (2009). The Tactical Use of Mobile Marketing: How Adolescents' Social Networking Can Best Shape Brand Extensions. *Journal of Advertising Research, 49*(1), 12-26.
Okazaki, S., & Barwise, P. (2011). Has the Time Finally Come for the Medium of the Future? Research on Mobile Advertising. *Journal of Advertising Research, 51*(1), 59-71.
Okazaki, S., Katsukura, A., & Nishiyama, M. (2007). How Mobile Advertising Works: The Role of Trust in Improving Attitudes and Recall. *Journal of Advertising Research, 47*(2), 165-178.
Okazaki, S., Li, H., & Hirose, M. (2009). Consumer Privacy Concerns and Preference for Degree of Regulatory Control: A Study of Mobile Advertising in Japan. *Journal of Advertising 38*(4), 63 - 77.
Okazaki, S., & Taylor, C. (2008). What is SMS Advertising and Why do Multinationals Adopt it? Answers from an Empirical Study in European Markets. *Journal of Business Research, 61*(1), 4-12.
Oliveira-Castro, J. M., Foxall, G. R., & Schrezenmaier, T. C. (2005). Patterns of Consumer Response to Retail Price Differentials. *The Service Industries Journal, 25*(3), 309-335.
Olney, T. J., Holbrook, M. B., & Batra, R. (1991). Consumer Responses to Advertising: The Effects of Ad Content, Emotions, and Attitude toward the Ad on Viewing Time. *Journal of Consumer Research, 17*, 440-453.
Olshavsky, R. W., & Spreng, R. A. (1996). An Exploratory Study of the Innovation Evaluation Process. *Journal of Product Innovation Management 13*, 512-529.
Onkvisit, S., & Shaw, J. (2004). *International marketing: Analysis and Strategy* (4 ed.). London: Routledge.
Ostlund, L. E. (1974). Perceived Innovation Attributes or Predictors of Innovativeness. *Journal of Consumer Research, 1*(September), 23-29.
Ouellette, J. A., & Wood, J. (1998). Habit and Intention in Everyday Life: The Multiple Processes by Which Past Behavior Predicts Future Behavior. *Psychological Bulletin, 124*(1), 54-74.
Overskeid, G. (1995). Cognitivist or Behaviourist- Who can tell the difference? The Case of Explicit and Implicit Knowledge. *British Journal of Psychology, 86*, 517-522.
Palka, W., Pousttchi, K., & Wiedemann, D. G. (2009). Mobile Word-of-Mouth: A Grounded Theory of Mobile Viral Marketing. *Journal of Information Technology (Palgrave Macmillan), 24*(2), 172-185.
Pallant, J. (2005). *SPSS survival manual* (2 ed.). Crows Nest: Allen & Unwin.
Park, C. W., Iyer, E. S., & Smith, D. C. (1989). The Effects of Situational Factors on In-Store Grocery Shopping Behavior: The Role of Store Environment and Time Available for Shopping. *Journal of Consumer Research, 15*(March), 422-433.
Peracchio, L. A., & Tybout, A. M. (1996). The Moderating Role of Prior Knowledge in Schema-Based Product Evaluation. *Journal of Consumer Research, 23*(December), 177-192.
Perlado, V. R., & Barwise, P. (2004). Mobile Advertising: A Research Agenda. In M. R. Stafford & R. J. Faber (Eds.), *Advertising, promotion, and the new media* (pp. 278-297). Armonk, New York M.E. Sharpe.

Peter, J. P., & Nord, W. R. (1982). A Clarification and Extension of Operant Conditioning Principles in Marketing. *Journal of Marketing, 46*, 102-107.
Peters, C., Amato, C. H., & Hollenbeck, C. R. (2007). An Exploratory Investigation of Consumers' Perceptions of Wireless Advertising. *Journal of Advertising, 36*(4), 129-145.
Pham, M. T. (2004). The Logic of Feeling. *Journal of Consumer Psychology, 14* (4), 360–369.
Porter, C. E., & Donthu, N. (2006). Using the Technology Acceptance Model to Explain How Attitudes Determine Internet Usage: The Role of Perceived Access Barriers and Demographics, *Journal of Business Research* (Vol. 59, pp. 999-1007).
Prendergast, G., & Wah, C. L. (2005). The Effectiveness of Cinema Advertising in Hong Kong. *International Journal of Advertising, 24*(1), 79-93.
Preston, C. C., & Colman, A. M. (2000). Optimal Number of Response Categories in Rating scales: Reliability, Validity, Discriminating Power, and Respondent Preferences. *Acta Psychologica, 104*, 1–15.
Price, L. L., & Ridgway, N. M. (1983). Development of a Scale to Measure Use Innovativeness. *Journal of Consumer Research, 10*(1), 679-684.
Proctor, T. (2005). *Essentials of Marketing Research* (4 ed.). Essex: Pearson Education.
Puntoni, S., & Tavassoli, N. (2005). Motivational Influences of Social Context on Consumer Behavior. *Advances in Consumer Research, 32*.
Pura, M. (2002). Case Study: The Role of Mobile Advertising in Building a Brand. In B. E. Mennecke & T. J. Strader (Eds.), *Mobile commerce: Technology, theory and applications* (pp. 291-333).
Pura, M. (2005). Linking Perceived Value and Loyalty in Location-Based Mobile Services. *Managing Service Quarterly, 15*(6), 509-538.
Rajala, A. K., & Hantula, D. A. (2000). Towards a Behavioral Ecology of Consumption: Delay-reduction Effects on Foraging in a Simulated Internet Mall. *Managerial and Decision Economics, 21*, 145-158.
Ralston, D. A., Holt, D. H., Terpstra, R. H., & Kai-Cheng, Y. (2007). The Impact of National Culture and Economic Ideology on Managerial Work Values: A Study of the United States, Russia, Japan, and China. *Journal of International Business Studies*, 1-19.
Ram, S. (1989). Successful Innovation Using Strategies to Reduce Consumer Resistance--An Empirical Test, *Journal of Product Innovation Management* (Vol. 6).
Ram, S., & Sheth, J. N. (1989). Consumer Resistance to Innovations: The Marketing Problem and Its Solutions. *Journal of Consumer Marketing, 6*(2), 5-14.
Ranchhod, A. (2007). Developing Mobile Marketing Strategies. *International Journal of Mobile Marketing, 2*(1), 76-83.
Reinders, M. J., Frambach, R. T., & Schoormans, J. P. L. (2010). Using Product Bundling to Facilitate the Adoption Process of Radical Innovations. *Journal of Product Innovation Management, 27*, 1127–1140.
Remenyi, D., Williams, B., Money, A., & Swartz, E. (2005). *Doing research in business and management: An introduction to process and method*. London: Sage Publications.
Rettie, R., & Brum, M. (2001). *M-Commerce: The Role of SMS Text Messages.* Paper presented at the COTIN-2001 Proceedings, From E-commerce to M-commerce.

Rettie, R., Grandcolas, U., & Deakins, B. (2005). Text Message Advertising: Response Rates and Branding Effects. *Journal of Targeting, Measurement & Analysis for Marketing, 13*(4), 304-312.
Richins, M. L. (1994). Special Possessions and the Expression of Material Values. *Journal of Consumer Research, 21*(3), 522-533.
Robertson, T. S. (1971). *Innovative behavior and communication*. New York: Holt, Rinehart and Winston.
Robertson, T. S., & Kennedy, J. N. (1968). Prediction of Consumer Innovators: Application of Multiple Discriminant Analysis. *Journal of Marketing Research, 5*(February), 64-69.
Roehrich, G. (2004). Consumer Innovativeness: Concepts and Measurements. *Journal of Business Research, 57*, 671-677.
Rogers, E. M. (1962). *Diffusion of innovations*. New York: Free Press.
Rogers, E. M. (1995). *Diffusion of innovations*. New York: Free Press.
Rogers, E. M., & Shoemaker, F. F. (1971). *Communication of Innovation*. New York: The Free Press.
Ronen, S., & Shenkar, O. (1985). Clustering Countries on Attitudinal dimensions: A Review and Synthesis. *Academy of Management Review, 10*(3), 435–454.
Rosbergen, E., & Pieters, R. (1997). Visual Attention to Advertising: A Segment-Level Analysis. *Journal of Consumer Research, 24*(3), 305-314.
Rosenzweig, S. (1978). *The Rozenzweig Picture-Frustration (P-F) Study Basic Manual*. St Louis: Rana House.
Rothschild, M. L., & Gaidis, W. C. (1981). Behavioral Learning Theory: Its Relevance to Marketing and Promotions. *45*, 70-78.
Rucker, D. D., & Galinsky, A. D. (2009). Conspicuous Consumption versus Utilitarian ideals: How Different Levels of Power Shape Consumer Behavior. *Journal of Experimental Social Psychology, 45*, 549–555.
Russell, J. A., & Mehrabian, A. (1978). Approach–Avoidance and Affiliation as Functions of the Emotion-Eliciting Quality of an Environment. *Environment and Behavior 10*(3), 355–387.
Ryu, K., & Jang, S. (2008). Influence of Restaurant's Physical Environments on Emotion and Behavioral Intention. *The Service Industries Journal, 28*(8), 1151–1165.
Saaksjarvi, M. (2003). Consumer Adoptions of Technological Innovations. *Journal of Innovation Management, 6*(2), 90-100.
Salo, J., & Tähtinen, J. (2005). Retailer Use of Permission-Based Mobile Advertising. In I. I. Clarke & T. Flaherty (Eds.), *Advances in Electronic Marketing*. USA: Idea Group Inc.
Saunders, M., Lewis, P., & Thornhill, A. (2007). *Research Methods for Business Students* (4 ed.): Pearson Education.
Schuh, A., & Holzmuller, H. (2003). Marketing strategies of western consumer goods firms in Central and Eastern Europe. In H.-J. Stuting & W. Dorow & C. F. Blazejewski (Eds.), *Change Management in Transition Economies – Integrating Corporate Strategy, Structure nd Culture* (pp. 176-188). New York, NY: Palgrave Macmillan.
Schwab, D. P. (1980). Construct validity in organization behavior. In B. M. Staw & L. L. Cummings (Eds.), *Research in organizational behavior* (Vol. 2, pp. 3-43). Greenwich, CT: JAI.

Scornavacca, E., & McKenzie, J. (2007). Unveiling Managers' Perceptions of the Critical Success Factors for SMS Based Campaigns. *International Journal of Mobile Communications, 5*(4), 445-456.
Sekaran, U. (2003). *Research methods for business: A skill building approach* (4 ed.). New York: Wiley.
Shankar, V., Venkatesh, A., Hofacker, C., & Naik, P. (2010). Mobile Marketing in the Retailing Environment: Current Insights and Future Research Avenues. *Journal of Interactive Marketing, 24*(2), 111-120.
Sharma, C., Herzog, J., & Melfi, V. (2008). *Mobile advertising: Supercharge your brand in the exploding wireless market*. Hoboken, New Jersey: John Wiley & Sons.
Sharma, S., Durand, R. M., & Gur-Arie, O. (1981). Identification and Analysis of Moderator Variables. *Journal of Marketing Research, 18*(3), 291-300.
Sherman, E., & Mathur, A. (1997). Store Environment and Consumer Purchase Behavior: Mediating Role of Consumer Emotions. *Psychology & Marketing, 14*(4), 361-378.
Shukla, P. (2010). Status Consumption in Cross-National Context Socio-Psychological, Brand and Situational Antecedents. *International Marketing Review, 27*(1), 108-129.
Sim, J. (1998). Collecting and Analysing Qualitative Data: Issues Raised by the Focus Group. *Journal of Advanced Nursing, 28*(2), 345-352.
Sim, J., & Wright, C. C. (2005). The Kappa Statistic in Reliability Studies: Use, Interpretation, and Sample Size Requirements. *Physical Therapy, 85*(3), 267-268.
Sivanathan, N., & Pettit, N. C. (2010). Protecting the Self through Consumption: Status Goods as Affirmational Commodities. *Journal of Experimental Social Psychology*, 564–570.
Skinner, B. F. (1953). *Science and Human Behavior*. New York: Macmillan.
Skinner, B. F. (1974). *About behaviorism*. New York: Knopf.
Skinner, B. F. (1984). The Operational Analysis of Psychological Terms. *Behavioral and Brain Sciences, 7*, 564-565
Smaato. (2010). *Europe's Big Five Join Mobile Advertising Billionaires Club*. Mobile Squared. Available: http://www.smaato.com/media/Smaato_WhitePaper_Europe_BIGFIVE_1026 2010.pdf.
Smith, T. L. (1994). *Behavior and Its Causes*: Springer.
Solomon, M. R. (1996). *Consumer Behavior* (3 ed.). Englewood Cliffs: Prentice Hall.
Sommer, R., Wynes, M., & Brinkley, G. (1992). Social Facilitation Effects in Shopping Behavior. *Environment and Behavior, 24*(3), 285-297.
Song, M., & Parry, M. E. (2009). Information, Promotion, and the Adoption of Innovative Consumer Durables. *Journal of Product Innovation Management, 26*, 441–454.
Soriano, M. Y., Foxall, G. R., & Pearson, G. J. (2002). Emotion and Environment: A Test of the Behavioural Perspective Model in a Latin American Context. *Journal of Consumer Behaviour, 2*(2), 138-154.
Spangenberg, E. R., Crowley, A. E., & Henderson, P. W. (1996). Improving the Store Environment: Do Olfactory Cues Affect Evaluations and Behaviors? *Journal of Marketing, 60*, 67–80.
Staats, A. W. (1996). *Behavior and personality: Psychological behaviorism*. New York: Springer.

Stanton, J. M. (1998). An Empirical Assessment of Data Collection Using the Internet,. *Personnel Psychology, 51*, 709-725.
Steenkamp, B. E. M., & Gielens, K. (2003). Consumer and Market Drivers of the Trial Probability of New Consumer Packaged Goods. *Journal of Consumer Research, 30*(December), 368-384.
Steenkamp, B. E. M., Hofstede, F., & Wedel, M. (1999). A Cross-National Investigation into the Individual and National Cultural Antecedents of Consumer Innovativeness. *Journal of Marketing, 63*(April), 55-69.
Stewart, D. W., Shamdasani, P. N., & Rook, D. W. (2007). *Focus groups: Theory and practice* (2 ed. Vol. 20). London: Sage Publications.
StrategyAnalytics. (2010). *Global Mobile Media Forecast 2001-2015*.
Stuart, E. W., Shimp, T. A., & Engle, R. W. (1987). Classical Conditioning of Consumer Attitudes: Four Experiments in an Advertising Context. *Journal of Consumer Research, 14*(3), 334-349.
Summers, T. A., & Hebert, P. A. (2001). Shedding Some Light on Store Atmospherics: Influence of Illumination on Consumer Behavior. *Journal of Business Research, 54*, 145-150.
Sundqvist, S., Frank, L., & Puumalainen, K. (2005). The Effects of Country Characteristics, Cultural Similarity and Adoption Timing on the Diffusion of Wireless Communications *Journal of Business Research, 58*, 107-110.
Szmigin, I., & Foxall, G. R. (2000). Interpretive Consumer Research: How Far Have We Come? *Qualitative Market Research: An International Journal, 3*(4), 187-197.
Tadajewski, M. (2004). The Philosophy of Marketing Theory: Historical and Future Directions. *The Marketing Review, 4*, 307-340.
Tai, S. H. C., & Fung, A. M. C. (1997). Application of Environmental Psychology to Model In-Store Buying Behaviour. *International Review of Retail, Distribution and Consumer Research, 7*(4), 311-337.
Takada, H., & Jain, D. (1991). Cross-National Analysis of Diffusion of Consumer Durable Goods in Pacific Rim Countries. *Journal of Marketing, 55*(April), 48-54.
Tashakkori, A., & Teddlie, C. B. (1998). *Mixed Methodology: Combining Qualitative and Quantitative Approaches* London: Sage.
Taylor, C. R., Miracle, G. E., & Wilson, R. D. (1997). The Impact of Information Level on the Effectiveness of U.S. and Korean Television Commercials. *Journal of Advertising, 36*(1), 1-18.
Taylor, J. W. (1977). A Striking Characteristic of Innovators. *Journal of Marketing Research, 14*(February), 104-107.
Tellis, G. J., Stremersch, S., & Yin, E. (2003). The International Takeoff of New Products: The Role of Economics, Culture, and Country Innovativeness. *Management Science, 22*(2), 188-208.
Tellis, G. J., Yin, E., & Bell, S. (2009). Global Consumer Innovativeness: Cross-Country Differences and Demographic Commonalities. *Journal of International Marketing, 17*(2), 1-22.
Tice, D. M., Bratslavsky, E., & Baumeister, R. F. (2001). Emotional Distress Regulation Takes Precedence over Impulse Control: If You Feel Bad, Do It! *Journal of Personality and Social Psychology, 80*(January), 53-67.
Todd, J. T., & Morris, E. K. (1983). Misconception and Miseducation: Presentations of Radical Behaviorism in Psychology Textbooks. *The Behavior Analyst, 6*(2), 153-160.

Tonglet, M. (2002). Consumer Misbehaviour: Ab Explratory Study of Shoplifting. *Journal of Consumer Behavior, 1*(4), 336-354.
Tornatzky, L. G., & Klein, J. K. (1982). Innovation Characteristics and Innovation Adoption implementattion: A Meta-analysis of Findings. *IEEE Transactions on Engineering Management, 29*(1), 28-43.
Trappey III, R. J., & Woodside, A. G. (2005). Consumer Responses to Interactive Advertising Campaigns Coupling Short-Message-Service Direct Marketing and TV Commercials. *Journal of Advertising Research, 45*(4), 382-401.
Tsang, M. M., Ho, S.-C., & Liang, T.-P. (2004). Consumer Attitudes Toward Mobile Advertising: An Empirical Study. *International Journal of Electronic Commerce, 8*(3), 65-78.
Turley, L. W., & Milliman, R. E. (2000). Atmospheric Effects on Shopping Behavior: A Review of the Experimental Evidence. *Journal of Business Research, 49*(2), 193-211.
Valente, T. W. (1996). Social Network Thresholds in the Diffusion of Innovations. *Social Networks, 18*, 69-89.
Van den Bulte, C., & Lilien, G. L. (2001). Medical Innovation Revisited: Social Contagion versus Marketing Effort. *American Journal of Sociology, 106*(5), 1409-1435.
Van der Heijden, H., Ogertschnig, M., & Van der Gaast, L. (2005). *Effects of context relevance and perceived risk on user acceptance of mobile information services.* Paper presented at the Proceedings of the Thirteenth European Conference on Information Systems (ECIS), Regensburg, Germany.
van Rijnsoever, F. J., & Donders, A. R. T. (2009). The Effect of Innovativeness on Different Levels of Technology Adoption. *Journal of the American Society for Information Science and Technology, 60*(5), 984–996.
Vandecasteele, B., & Geuens, M. (2010). Motivated Consumer Innovativeness: Concept, Measurement, and Validation. *International Journal of Research in Marketing, Article in press*.
Varnali, K., & Toker, A. (2010). Mobile Marketing Research: The-State-of-the-Art. *International Journal of Information Management, 30*, 144–151.
Venkatesh, A. (2000). Determinants of Perceived Ease of Use: Integrating Perceived Behavioral Control, Computer Anxiety and Enjoyment into the Technology Acceptance Model. *Information Systems Research, 11*, 342–365.
Venkatesh, A., & Bala, H. (2008). Technology Acceptance Model 3 and a Research Agenda on Interventions. *Decision Sciences, 39*(2), 273-315.
Venkatesh, V., & Davis, F. D. (2000a). A Theoretical Extension of the Technology Acceptance Model: Four Longitudinal Field Studies. *Management Science, 46*, 186-204.
Venkatesh, V., & Davis, F. D. (2000b). A Theoretical Extension of the Technology Acceptance Model: Four Longitudinal Field Studies. *Management Science, 46*(2), 186-204.
Venkatesh, V., Morris, M. G., Davis, G. B., & Davis, F. D. (2003). User Acceptance of Information Technology: Toward a Unified View. *MIS Quarterly, 27*(3), 425-478.
Venkatraman, M. P. (1991). The Impact of Innovativeness and Innovation Type on Adoption. *Journal of Retailing, 67*(1), 51-67.
Venkatraman, M. P., & Price, L. L. (1990). Differentiating between Cognitive and Sensory Innovativeness: Concepts, Measurement, and Implications. *Journal of Business Research, 20*(4), 293–315.

Verhoef, P. C., & Langerak, F. (2001). Possible Determinants of Consumers' Adoption of Electronic Grocery Shopping in the Netherlands. *Journal of Retailing and Consumer Services, 8*, 275-285.
Vesanen, J. (2007). What is Personalization? A Conceptual Framework. *European Journal of Marketing, 41*(5/6), 409-418.
Vogt, D. S., King, D. W., & King, L. A. (2004). Focus Groups in Psychological Assessment: Enhancing Content Validity by Consulting Members of the Target Population. *Psychological Assessment 16*(3), 231–243.
Vrechopoulos, A. P., O'Keefe, R. M., Doukidis, G. I., & Siomkos, G. J. (2004). Virtual Store Layout: An Experimental Comparison in the Context of Grocery Retail. *Journal of Retailing, 80*, 13–22.
Wais, J. S., & Clemons, E. K. (2008). Understanding and Implementing Mobile Social Advertising. *International Journal of Mobile Marketing, 3*(1), 12-18.
Wakefield, K. L., & Inman, J. J. (2003). Situational Price Sensitivity: The Role of Consumption Occasion, Social Context and Income. *Journal of Retailing, 79*, 199-212.
Wang, Q., Dacko, S., & Gad, M. (2008). Factors Influencing Consumers' Evaluation and Adoption Intention of Really-New Products or Services: Prior Knowledge, Innovativeness and Timing of Product Evaluation. *Advances in Consumer Research, 35*, 416-422.
Watson, J. B. (1913). Psychology as the Behaviorist Views It. *Psychological Review, 20*(2), 158-177.
Watts, D. J., & Dodds, P. S. (2007). Influentials, Networks, and Public Opinion Formation *Journal of Consumer Research, 34*(4), 441 - 458.
Weilbacher, W. M. (2003). How Advertising Affects Consumers. *Journal of Advertising Research, 43*(2), 230-234
Wells, L. G. (1994). Western Concepts, Russian Perspectives: Meanings of Advertising in the Former Soviet Union. *Journal of Advertising, 23*(1), 83-95.
Weng, L.-J. (2004). Impact of the Number of Response Categories and Anchor Labels on Coefficient Alpha and Test-Retest Reliability *Educational and Psychological Measurement, 64*, 956-972.
Wicker, A. W. (1969). Attitude versus Actions: The Relationship of Verbal and Overt Behavioral Responses to Attitude Objects. *Social Issues, 25*, 48-71.
Wilkinson, S. (2004). *Focus Group Research* (2 ed.). Thousand Oaks, CA: Sage Publications.
Wilson, A. (2006). *Marketing research: An intergrated approach* (2 ed.). Essex: Pearson Education.
Windham, L., & Orton, K. (2000). *The soul of the new consumer: The attitudes, behavior and preferences of E-customers*. New York: Allworth Communications Inc.
Winters, L. C., & Wallace, W. H. (1970). On Operant Conditioning Techniques. *Journal of Advertising Research, 10*, 39–45.
Wolff, B., Knodel, J., & Sittitrai, W. (1993). Focus Groups and Surveys as Complementary Research Methods: A Case Example. In D. L. Morgan (Ed.), *Successful focus group: Advancing the state of the art* (pp. 118-136). Newbury Park: Sage.
Wood, S. L., & Lynch, J. G. J. (2002). Prior Knowledge and Complacency in New Product Learning. *Journal of Consumer Research, 29*(December), 416-426.

Wood, S. L., & Moreau, S. P. (2006). From Fear to Loathing? How Emotion Influences the Evaluation and Early Use of Innovations. *Journal of Marketing, 70*(July), 44-57.

Wood, S. L., & Swait, J. (2002). Psychological Indicators Measurement, and Implications of Innovation Adoption: Cross-Classification Based on Need for Cognition and Need for Change. *Journal of Consumer Psychology, 12*(1), 1-13.

Wu, J.-H., & Wang, S.-C. (2005). What drives mobile commerce? An empirical evaluation of the revised technology acceptance model. *Information & Management, 42*(5), 719-729.

Xiao, H. (2006). *Intellectual Property Theft and Illicit Consumer Behaviour: A Psychology of Counterfeit Buying.* Unpublished PhD Thesis, Durham University, Durham.

Xiao, H., & Nicholson, M. (2010). Trick or Treat? An Examination of Relationships in a Nondeceptive Counterfeit Market *Journal of Organizational Behavior Management, 20*, 247-270.

Xu, D. J. (2006-2007). The Influence of Personalization in Affecting Consumer Attitudes toward Mobile Advertising in China. *Journal of Computer Information Systems, Winter*, 9-19.

Yalcinkaya, G. (2008). A Culture-Based Approach to Understanding the Adoption and Diffusion of New Products across Countries. *International Marketing Review, 25*(2), 202-214.

Yani-de-Soriano, M. M., & Foxall, G. R. (2002). A Spanish Translation of Mehrabian and Russell's Emotionality Scales for Environmental Consumer Psychology. *Journal of Consumer Behaviour, 2*(1), 23-36.

Yani-de-Soriano, M. M., & Foxall, G. R. (2006). The Emotional Power of Place: The Fall and Rise of Dominance in retail research. *Journal of Retailing and Consumer Services, 13*, 403–416.

Yani-de-Soriano, M. M., Foxall, G. R., & Pearson, G. J. (2002). Emotion and Environment: A Test of the Behavioural Perspective Model in a Latin American Context. *Journal of Consumer Behaviour, 2*(2), 138-154.

Yavas, U., & Tuncalp, S. (1984). Perceived Risk in Grocery Outlet Selection:A Case Study in Saudi Arabia. *European Journal of Marketing, 18*(3), 13-25.

Yermekbayeva, D., & Xiao, S. (2011). An Investigation of Determinants of Opt-in Mobile Advertising Choice Behaviour, *40th European Marketing Academy Conference*. Ljubljana, Slovenia.

Zhang, J., & Mao, E. (2008). Understanding the Acceptance of Mobile SMS Advertising among Young Chinese consumers. *Psychology & Marketing, 25*(8), 787-805.

Zhang, Y., & Gelb, B. D. (1996). Matching Advertising Appeals to Culture: The Influence of Products' Use Conditions. *Journal of Advertising, 25*(3), 29-46.

Ziamou, P., & Ratneshwar, S. (2002). Promoting Consumer Adoption of High-Technology Products: Is More Information Always Better? *Journal of Consumer Psychology, 12*(4), 341–351.

Appendix 1: BPM factors cross-tabulation

PHYSICAL +			USER TYPE			
			Non-users	**Occasional**	**Regular users**	**Total**
Items	**Entertaining content**	Count	18	12	14	**44**
		Expected count	14.4	18.0	11.6	44.0
		% within item	40.9%	27.3%	31.8%	100.0%
	User's location	Count	3	4	0	**7**
		Expected count	2.3	2.9	1.8	7.0
		% within item	42.9%	57.1%	.0%	100.0%
	Mobile phone's capabilities	Count	4	4	0	**8**
		Expected count	2.6	3.3	2.1	8.0
		% within item	50.0%	50.0%	.0%	100.0%
	Promotional price content	Count	37	55	29	**121**
		Expected count	39.7	49.4	31.8	121.0
		% within item	30.6%	45.5%	24.0%	100.0%
	Content informativeness	Count	63	74	55	**192**
		Expected count	63.0	78.4	50.5	192.0
		% within item	32.8%	38.5%	28.6%	100.0%
	Short advertisement	Count	4	6	2	**12**
		Expected count	3.9	4.9	3.2	12.0
		% within item	33.3%	50.0%	16.7%	100.0%
	Good content design	Count	2	8	5	**15**
		Expected count	4.9	6.1	3.9	15.0
		% within item	13.3%	53.3%	33.3%	100.0%
Total		Count	131	163	105	399
		Expected count	131.0	163.0	105.0	399.0

.

PHYSICAL -			USER TYPE			
			Non-users	Occasional	Regular	Total
Items	Low informativeness	Count	34	35	1	**70**
		Expected count	33.2	31.8	4.9	70.0
		% within item	48.6%	50.0%	1.4%	100.0%
	Long advertisement	Count	7	1	3	**11**
		Expected count	5.2	5.0	.8	11.0
		% within item	63.6%	9.1%	27.3%	100.0%
	Poor content design	Count	0	5	3	**8**
		Expected count	3.8	3.6	.6	8.0
		% within item	.0%	62.5%	37.5%	100.0%
	Substitutable information	Count	6	4	0	**10**
		Expected count	4.7	4.5	.7	10.0
		% within item	60.0%	40.0%	.0%	100.0%
Total		Count	47	45	7	99
		Expected count	47.0	45.0	7.0	99.0

.

SOCIAL +			USER TYPE			
			Non-users	Occasional	Regular users	Total
Items	Personal recommendation	Count	6	8	16	**30**
		Expected count	6.4	7.1	16.4	30.0
		% within item	20.0%	26.7%	53.3%	100.0%
	M-advertising popularity	Count	3	2	7	**12**
		Expected count	2.6	2.9	6.6	12.0
		% within item	25.0%	16.7%	58.3%	100.0%
Total		Count	9	10	23	42
		Expected count	9.0	10.0	23.0	42.0

.

TEMPORAL+			USER TYPE			
			Non-users	**Occasional**	**Regular users**	**Total**
Items	**Leisure time**	Count	3	3	1	**7**
		Expected count	4.1	1.8	1.0	7.0
		% within item	42.9%	42.9%	14.3%	100.0%
	Timeliness	Count	13	4	3	**20**
		Expected count	11.9	5.2	3.0	20.0
		% within item	65.0%	20.0%	15.0%	100.0%
Total		Count	16	7	4	27
		Expected count	16.0	7.0	4.0	27.0

.

UTILITARIAN REINFORCEMENTS			USER TYPE			
			Non-users	**Occasional**	**Regular users**	**Total**
Items	**Economic rewards**	Count	53	76	70	**199**
		Expected count	53.6	74.2	71.2	199.0
		% within item	26.6%	38.2%	35.2%	100.0%
	Hedonic benefits	Count	18	15	30	**63**
		Expected count	17.0	23.5	22.5	63.0
		% within item	28.6%	23.8%	47.6%	100.0%
	Usefulness	Count	63	74	55	**192**
		Expected count	51.8	71.6	68.7	192.0
		% within item	32.8%	38.5%	28.6%	100.0%
	Mobility/convenience benefit	Count	1	7	12	**20**
		Expected count	5.4	7.5	7.2	20.0
		% within item	5.0%	35.0%	60.0%	100.0%
	Socialisation benefits	Count	6	13	21	**40**
		Expected count	10.8	14.9	14.3	40.0
		% within item	15.0%	32.5%	52.5%	100.0%
	Relieving boredom	Count	11	19	15	**45**
		Expected count	12.1	16.8	16.1	45.0
		% within item	24.4%	42.2%	33.3%	100.0%
	Improved personal effectiveness	Count	10	20	12	**42**
		Expected count	11.3	15.7	15.0	42.0
		% within item	23.8%	47.6%	28.6%	100.0%
Total		Count	162	224	215	**601**
		Expected count	162.0	224.0	215.0	601.0

.

UTILITARIAN PUNISHMENTS			USER TYPE			
			Non-users	Occasional	Regular users	Total
Items	Distraction	Count	8	8	17	**33**
		Expected count	16.6	11.4	5.0	33.0
		% within item	24.2%	24.2%	51.5%	100.0%
	Usage Interruption	Count	17	2	6	**25**
		Expected count	12.6	8.6	3.8	25.0
		% within item	68.0%	8.0%	24.0%	100.0%
	Useless information (spam)	Count	34	35	1	**70**
		Expected count	35.2	24.2	10.6	70.0
		% within item	48.6	50.0%	1.4%	100.0%
	Negative emotions (hedonic cost)	Count	70	16	16	**102**
		Expected count	51.3	35.2	15.4	102.0
		% within item	68.6%	15.7%	15.7%	100.0%
	Time wasting	Count	9	1	0	**10**
		Expected count	5.0	3.5	1.5	10.0
		% within item	90.0%	.10.0%	.0%	100.0%
	Security/ privacy risk	Count	85	91	27	**203**
		Expected count	102.2	70.1	30.7	203.0
		% within item	41.9%	44.8%	13.3%	100.0%
Total		Count	223	153	67	**443**
		Expected count	223.0	153.0	67.0	443.0

.

INFORMATIONAL PUNISHMENTS			USER TYPE			
			Non-users	Occasional	Regular users	Total
Items	Negative feedback from other people	Count	11	2	3	**16**
		Expected count	11.6	2.9	1.5	16.0
		% within item	68.8%	12.5%	18.8%	100.0%
	Negative feedback from peers	Count	13	4	0	**17**
		Expected count	12.4	3.1	1.5	17.0
		% within item	76.5%	23.5%	.0%	100.0%
Total		Count	24	6	3	33
		Expected count	24.0	6/0	3.0	33.0

.

APPENDIX 2A: Literature sources for behaviour setting items

Construct	Item	Source
Physical setting	Informative content	**M-advertising Literature:** (Bauer, Barnes, Reichardt, & Neumann, 2005; Merisavo et al., 2007; Okazaki, 2004; Tsang, Ho, & Liang, 2004; Yermekbayeva & Xiao, 2011; Zhang & Mao, 2008) **Innovation adoption literature:**(Chtourou & Souiden, 2010; Hong & Tam, 2006; Li et al., 2008; Mallat et al., 2009; Porter & Donthu, 2006) ***Focus groups***
	Promotional price content	**M-advertising Literature:** (Peters, Amato, & Hollenbeck, 2007; Pura, 2005; Yermekbayeva & Xiao, 2011) ***Focus groups***
	Entertaining content	**M-advertising Literature:** (Bauer et al., 2005; Merisavo et al., 2007; Okazaki, 2004; Tsang et al., 2004; Xu, 2006-2007; Yermekbayeva & Xiao, 2011; Zhang & Mao, 2008). **Innovation adoption literature:**(Chtourou & Souiden, 2010) ***Focus groups***
	Quality of content design	**M-advertising Literature:** (Barnes & Scornavacca, 2008; Yermekbayeva & Xiao, 2011) ***Focus groups***
	Advertisement length	**M-advertising Literature:** (Barwise & Strong, 2002; Leek & Christodoulides, 2009; Yermekbayeva & Xiao, 2011) ***Focus groups***
	Limited number of m-advertisements	**M-advertising Literature:** (Bamba & Barnes, 2007; Barwise & Strong, 2002; Carroll, Barnes, Scornavacca, & Fletcher, 2007; Leek & Christodoulides, 2009)
	Mobile phone's technological capabilities	**M-advertising Literature:** (Carroll et al., 2007; Figge, 2004; Figge & Schrott, 2003; Xu, 2006-2007) ***Focus groups***
	User location (home, work, store)	**M-advertising Literature:** (Figge, 2004; Lee & Jun, 2007; Mallat, Rossi, Tuunainen, & Oorni, 2009; Merisavo et al., 2007) **Innovation adoption literature:**(Figge, 2004; Lee, Kim, & Kim, 2005; Lee & Jun, 2007; Mallat et al., 2009) ***Focus groups***
Social setting	Personal recommendation	**M-advertising Literature:** (Barnes & Scornavacca, 2008; Leek & Christodoulides, 2009; Wais & Clemons, 2008; Yermekbayeva & Xiao, 2011) **Innovation adoption literature:**(Cotte & Wood, 2004; Götze et al., 2009) ***Focus groups***
	M-advertising popularity	**Innovation adoption literature:**(Abrahamson & Rosenkopf, 1997; Delre, Jager, Bijmolt, & Janssen, 2010; Granovetter & Soong, 1986; Valente, 1996; Yermekbayeva & Xiao, 2011) ***Focus groups***
	Immediate social surroundings	**Consumer behaviour literature:** (Ebster, Wagner, & Neumueller, 2008; Luo, 2005; Mangleburg, Doney, & Bristol, 2004; Michon, Chebat, & Turley, 2005; Sommer, Wynes, & Brinkley, 1992; Wakefield & Inman, 2003)
Temporal setting	Leisure time	**M-advertising Literature: (**Yermekbayeva & Xiao, 2011) **Focus groups**
	Timeliness (temporal relevance)	**M-advertising Literature:** (Bamba & Barnes, 2007; Barnes & Scornavacca, 2008; Carroll et al., 2007; Merisavo et al., 2007; Pura, 2005; Rettie & Brum, 2001; Salo & Tähtinen, 2005; Yermekbayeva & Xiao, 2011). ***Focus groups***
	Possibility to select delivery times	**M-advertising Literature:** (Bamba & Barnes, 2007; Carroll et al., 2007; Leek & Christodoulides, 2009; Rettie & Brum, 2001; Yermekbayeva & Xiao, 2011)
	Season time	**M-advertising Literature:** (Bamba & Barnes, 2007; Barnes & Scornavacca, 2008; Carroll et al., 2007; Merisavo et al., 2007; Pura, 2005; Rettie & Brum, 2001; Salo & Tähtinen, 2005) **Consumer behaviour literature:** (Aggarwal & Vaidyanathan, 2003; Park, Iyer, & Smith, 1989)
Regulatory setting	Requirement to download software on mobile phone	**M-advertising Literature:** (Yermekbayeva & Xiao, 2011) **Ad-funded mobile operator case study:** Blyk operator T&C
	Requirement complete an application form	**M-advertising Literature: (**Yermekbayeva & Xiao, 2011) **Ad-funded mobile operator case study:**Blyk operator T&C
	Requirement to sign a fixed contract	**M-advertising Literature:** (Yermekbayeva & Xiao, 2011) **Ad-funded mobile operator case study:**Blyk operator T&C
	Requirement to provide additional information	**M-advertising Literature: (**Yermekbayeva & Xiao, 2011) **Ad-funded mobile operator case study:**Blyk operator T&C

APPENDIX 2B: Literature sources for behaviour consequences items

Construct	Item	Source
Utilitarian Reinforcement	Improved personal effectiveness	**M-advertising literature:** (Laszlo, 2009; Peters, Amato, & Hollenbeck, 2007; Yermekbayeva & Xiao, 2011) ***Focus groups***
	Relieving boredom	**M-advertising Literature:** (Laszlo, 2009; Peters et al., 2007; Yermekbayeva & Xiao, 2011) ***Focus groups***
	Bargain	**M-advertising Literature:** (Yermekbayeva & Xiao, 2011) ***Focus groups***
	Economic rewards	**M-advertising literature:**(Barwise & Strong, 2002; Krishnamurthy, 2001; Leek & Christodoulides, 2009; Rettie & Brum, 2001; Tsang, Ho, & Liang, 2004; Yermekbayeva & Xiao, 2011) ***Innovation adoption literature:***(Lammers, 1991; Song & Parry, 2009), ***Focus groups***
	Usefulness	**M-advertising literature:**(Bauer, Barnes, Reichardt, & Neumann, 2005; Merisavo et al., 2007; Okazaki, 2004; Tsang et al., 2004; Yermekbayeva & Xiao, 2011; Zhang & Mao, 2008) **Innovation adoption literature:**(Chtourou & Souiden, 2010; Flight, Allaway, Kim, & D'Souza, 2011; Holak & Lehmann, 1990; Hong & Tam, 2006; Li, Glass, & Records, 2008; Mallat, Rossi, Tuunainen, & Oorni, 2009; Ostlund, 1974; Porter & Donthu, 2006; Tornatzky & Klein, 1982; Verhoef & Langerak, 2001) ***Focus groups***
	Mobility/Convenience benefit	**M-advertising literature:**(Pura, 2005; Yermekbayeva & Xiao, 2011) ***Focus groups***
	Socialisation benefit	**M-advertising literature:**(Bauer et al., 2005; Peters et al., 2007; Yermekbayeva & Xiao, 2011; Zhang & Mao, 2008) ***Focus groups***
	Entertaining utility (hedonic benefit)	**M-advertising literature:**(Bauer et al., 2005; Merisavo et al., 2007; Okazaki, 2004; Tsang et al., 2004; Xu, 2006-2007; Yermekbayeva & Xiao, 2011; Zhang & Mao, 2008) **Innovation adoption literature:** (Chtourou & Souiden, 2010; Hong & Tam, 2006) ***Focus groups***

Construct	Item	Source
Informational Reinforcement	Image of socially active person.	**M-advertising Literature:** (Yermekbayeva & Xiao, 2011) **Innovation adoption literature:**(Moore, 1999; Rogers, 1962, 1995)
	Image of a fashionable person	**M-advertising Literature:** (Yermekbayeva & Xiao, 2011) **Innovation adoption literature:**(Moore, 1999; Rogers, 1962, 1995)
	Image of a knowledgeable consumer	**M-advertising Literature:** (Yermekbayeva & Xiao, 2011) **Innovation adoption literature:**(Moore, 1999; Rogers, 1962, 1995)
Informational Punishment	Image of a money- conscious person.	**M-advertising Literature:** (Yermekbayeva & Xiao, 2011) ***Focus groups***
	Image of a person experiencing financial difficulties	**M-advertising Literature:** (Yermekbayeva & Xiao, 2011) ***Focus groups***
	Image of a person who has overabundance of time and no other serious commitments	**M-advertising Literature:** (Yermekbayeva & Xiao, 2011) ***Focus groups***

.

Construct	Item	Source
Utilitarian Punishment	Disappointment	**M-advertising Literature:** (Yermekbayeva & Xiao, 2011) ***Focus groups***
	Interruption of mobile phone use	**M-advertising Literature:** (Yermekbayeva & Xiao, 2011) ***Focus groups***
	Disturbance from other activities	**M-advertising Literature:** (Yermekbayeva & Xiao, 2011) ***Focus groups***
	Irrelevant information (spam)	**M-advertising literature**:(Haghirian, Madlberger, & Tanuskova, 2005; Merisavo et al., 2007; Okazaki, 2004; Rettie & Brum, 2001; Tsang et al., 2004; Yermekbayeva & Xiao, 2011) ***Focus groups***
	Time waste	**M-advertising Literature:** (Yermekbayeva & Xiao, 2011) ***Focus groups***
	Financial risk	**M-advertising literature**:(Anckar, Carlsson, & Walden, 2003; Peters et al., 2007; Pura, 2005; Van der Heijden, Ogertschnig, & Van der Gaast, 2005; Yermekbayeva & Xiao, 2011) **Innovation adoption literature:** (Bearden & Shimp, 1982; Black, Lockett, Winklhofer, & Ennew, 2001; Holak & Lehmann, 1990; Kim, Chan, & Gupta, 2007; Ostlund, 1974)
	Privacy and security risk	**M-advertising literature**:(Bamba & Barnes, 2007; Bauer et al., 2005; Carroll, Barnes, Scornavacca, & Fletcher, 2007; Merisavo et al., 2007; Peters et al., 2007; Yermekbayeva & Xiao, 2011) **Innovation adoption literature:**(Aldás-Manzano, Lassala-Navarré, Ruiz-Mafé, & Sanz-Blas, 2009; Khalifa & Ning Shen, 2008; Wu & Wang, 2005) ***Focus groups***
Informational Reinforcement	Image of socially active person.	**M-advertising Literature:** (Yermekbayeva & Xiao, 2011) **Innovation adoption literature:**(Moore, 1999; Rogers, 1962, 1995)
	Image of a fashionable person	**M-advertising Literature:** (Yermekbayeva & Xiao, 2011) **Innovation adoption literature:**(Moore, 1999; Rogers, 1962, 1995)
	Image of a knowledgeable consumer	**M-advertising Literature:** (Yermekbayeva & Xiao, 2011) **Innovation adoption literature:**(Moore, 1999; Rogers, 1962, 1995)
Informational Punishment	Image of a money-conscious person.	**M-advertising Literature:** (Yermekbayeva & Xiao, 2011) ***Focus groups***
	Image of a person experiencing financial difficulties	**M-advertising Literature:** (Yermekbayeva & Xiao, 2011) ***Focus groups***
	Image of a person who has overabundance of time and no serious commitments	**M-advertising Literature:** (Yermekbayeva & Xiao, 2011) ***Focus groups***

APPENDIX 2C: Literature sources for learning history items

Construct	Item	Source
Past experience	Experience with mobile advertiser/medium	**M-advertising literature:**(Jayawardhena, Kuckertz, Karjaluoto, & Kautonen, 2009; Karjaluoto, Jayawardhena, Kuckertz, & Kautonen, 2008; Kautonen, Karjaluoto, Jayawardhena, & Kuckertz, 2007; Yermekbayeva & Xiao, 2011) **Innovation adoption literature:**(Prins & Verhoef, 2007; Thompson & Sinha, 2008)
	Experience with mobile advertising/innovation	**M-advertising literature:**(Barnes & Scornavacca, 2008; Jayawardhena et al., 2009; Yermekbayeva & Xiao, 2011) **Innovation adoption literature:**(Alpert, 1994; Blake, Neuendorfb, & Valdiserric, 2005; Chau & Hui, 1998; Citrin, Sprott, Silverman, & Stem, 2000; Danko & Maclachlan, 1983; Dickerson & Gentry, 1983; Eastlick & Lotz, 1999; Engel, Blackwell, & Kegerreis, 1969; Foxall, 1993; Foxall, 2007; Gatignon & Robertson, 1985; Goldsmith, Flynn, & Goldsmith, 2003; Munnukka, 2007; Robertson, 1971; Robertson & Kennedy, 1968; Rogers, 1995; Taylor, 1977
Reliance on past experience	Reliance on different types of experiences	**M-advertising literature:**(Jayawardhena et al., 2009; Karjaluoto et al., 2008; Kautonen et al., 2007; Yermekbayeva & Xiao, 2011) **Innovation adoption literature:** (Bass, 1969; Gatignon & Robertson, 1985; Lafferty, Goldsmith, & Flynn, 2005; Mahajan, Muller, & Bass, 1990; Midgley, 1977; Midgley & Dowling, 1978; Olshavsky & Spreng, 1996)

APPENDIX 3: Pilot test questionnaire

Organisation: *Durham University*

Survey Description: *The survey will be used as part of an academic thesis for a DBA.*

Survey Purpose: *The purpose of this survey is to collect data on various aspects of consumer behaviours toward advertising via mobile phones.*

PLEASE READ THE FOLLOWING NOTES BEFORE COMPLETING THE QUESTIONNAIRE:

- In this survey the term "mobile advertising" refers only to advertising via mobile phones.

- To subscribe/opt-in for mobile advertising means to agree to receive promotional information on your mobile phone and to grant the advertiser or your mobile service provider permission to send you promotional information.

- Mobile advertising may be delivered to you in different formats:
    1. In-application mobile advertising (e.g. branded games/applications)
    2. Mobile SMS/MMS advertising
    3. Mobile Video advertising

There are no right or wrong answers – just choose the statement that best reflects your opinion. All survey responses will be kept strictly confidential.

Thank you for your participation in this study.

Section 1: *Please use the 7-point scale to indicate your agreement or disagreement with each statement.*

		Strongly disagree	Moderately disagree	Slightly disagree	Neither agree nor disagree	Slightly agree	Moderately agree	Strongly agree
1	I think I will opt-in for mobile advertising if the advertising content is relevant to my interests.	O	O	O	O	O	O	O
2	It is likely that I will opt-in for mobile advertising if the advertisements contain some practical information about product prices and ongoing offers.	O	O	O	O	O	O	O
3	For me to opt-in for mobile advertising, it has to be entertaining and fun to use	O	O	O	O	O	O	O
4	I would be tempted to opt-in for mobile advertising if the advertisements are colourful and well-designed.	O	O	O	O	O	O	O
5	I do **not** think I will use mobile advertising if the advertisements too long or overload me with information	O	O	O	O	O	O	O
6	For me to opt-in for mobile advertising , I need to be sure that I would never receive more advertisements per day than I consider acceptable.	O	O	O	O	O	O	O
7	I think having an option to specify what kind of promotional information I would like to receive would increase the chances of me opting-in for mobile advertising.	O	O	O	O	O	O	O

		Strongly disagree	Moderately disagree	Slightly disagree	Neither agree nor disagree	Slightly agree	Moderately agree	Strongly agree
8	For me, my office/university/college is the most likely place to subscribe to mobile advertising	O	O	O	O	O	O	O
9	For me, my home is the most likely place to subscribe to mobile advertising	O	O	O	O	O	O	O
10	I think it is most likely that I subscribe to mobile advertising when I am in a store/shopping centre	O	O	O	O	O	O	O
11	If my family and friends opt-in for mobile advertising it is likely I will try mobile advertising too	O	O	O	O	O	O	O
12	Knowing that many people in my country have already subscribed to mobile advertising would make me more likely to follow this trend too.	O	O	O	O	O	O	O
13	I do **not** think I will subscribe to mobile advertising if I am with someone at the time when I am offered to do it	O	O	O	O	O	O	O
14	I do **not** think I will subscribe to mobile advertising if I am in a crowded place when I am offered to do it	O	O	O	O	O	O	O
15	For me, the most likely time to subscribe to mobile advertising is when I am not busy (e.g. lunch breaks, holidays, weekends)	O	O	O	O	O	O	O

		Strongly disagree	Moderately disagree	Slightly disagree	Neither agree nor disagree	Slightly agree	Moderately agree	Strongly agree
16	For me, the most likely time to subscribe to mobile advertising is when I look for that kind of information (e.g. collect information about a certain product)	O	O	O	O	O	O	O
17	For me to subscribe to mobile advertising, I need to be able to put restrictions on the advertisement delivery times	O	O	O	O	O	O	O
18	If I am offered to subscribe to mobile advertising during holiday/sale season or any other period of intensive shopping it is likely that I will opt-in for it	O	O	O	O	O	O	O
19	I will **refuse** to opt-in for mobile advertising if I need to download additional software to receive it	O	O	O	O	O	O	O
20	I will **not** subscribe to mobile advertising if I need to complete an application form to receive it	O	O	O	O	O	O	O
21	If subscription to mobile advertising requires me to sign a contract which specifies general conditions of mobile advertising service I will **not** opt-in for it	O	O	O	O	O	O	O
22	If subscription to mobile advertising requires me to provide additional details about myself I will **refuse** to subscribe to it	O	O	O	O	O	O	O

Section 2: *Please use the 7-point scale to indicate your agreement or disagreement with each statement*

		Strongly disagree	Moderately disagree	Slightly disagree	Neither agree nor disagree	Slightly agree	Moderately agree	Strongly agree
23	If I subscribed to mobile advertising before and liked that experience it is likely that I will opt-in for it again.	O	O	O	O	O	O	O
24	Hearing from my friend that he/she subscribed to mobile advertising before and liked that experience will encourage me to opt-in for it.	O	O	O	O	O	O	O
25	The more I hear about other people having positive experiences with mobile advertising in general, the more likely it is that I will subscribe to it.	O	O	O	O	O	O	O
26	If I am offered to subscribe to mobile advertising by a company I know and had good experiences with before, it is likely that I will agree to receive their mobile advertisements.	O	O	O	O	O	O	O
27	If I am offered to subscribe to mobile advertising by a company my friends had good experiences with, it is likely that I will agree to opt-in.	O	O	O	O	O	O	O
28	The more positive reviews I read about a certain company on the Internet, the more likely it is that I will agree to receive their mobile advertisements.	O	O	O	O	O	O	O

Section 3

29. Over the past 12 months, to how many companies have you given permission to send you promotional information via mobile phone?

a) More than 10
b) 6-10
c) 3-5
d) Less than 2
e) None (if none please proceed to Question 31)

30. How would you describe your experiences with mobile services in general before you opted-in for mobile advertising for the first time? *(Please tick one)*

a) Very negative
b) Generally negative
c) Somewhat negative
d) Neither positive nor negative
e) Somewhat positive
f) Generally positive
g) Very positive

31. How would you describe your experiences with the company to whose mobile advertising you opted-in before you opted-in for their mobile advertising? *(Please tick one)*

a) Very negative
b) Generally negative
c) Somewhat negative
d) Neither positive nor negative
e) Somewhat positive
f) Generally positive
g) Very positive

32. Would you subscribe to mobile advertising in future? *(Please tick one)*

a) Yes
b) Maybe/Not sure
c) No ***(if no** proceed to Section 4)*

Please use the 7-point scale to indicate your agreement or disagreement with each statement

		Strongly disagree	Moderately disagree	Slightly disagree	Neither agree nor disagree	Slightly agree	Moderately agree	Strongly agree
33	Some people I know had positive experiences with mobile advertising	O	O	O	O	O	O	O
34	General impression I get from mass media is that most people who try using mobile advertising have positive experiences with it	O	O	O	O	O	O	O
35	Judging by the information available in mass media, companies which offer mobile advertising are worth dealing with	O	O	O	O	O	O	O
36	Some people I know had good experiences with companies offering mobile advertising	O	O	O	O	O	O	O

Section 4: *Please use the 7-point scale to indicate your agreement or disagreement with each statement.*

		Strongly disagree	Moderately disagree	Slightly disagree	Neither agree nor disagree	Slightly agree	Moderately agree	Strongly agree
37	Mobile advertising saves (would save) me time in searching information.	O	O	O	O	O	O	O
38	Mobile advertising helps (would help) me fill time when bored.	O	O	O	O	O	O	O
39	Mobile advertising helps (would help) me save money because it informs (would inform) me about bargains.	O	O	O	O	O	O	O
40	I think mobile advertising helps (would help) save money because I will get discount vouchers and rewards for subscribing to it.	O	O	O	O	O	O	O
41	I believe mobile advertising is (would be) useful because it delivers information that is highly relevant to my interests.	O	O	O	O	O	O	O
42	Mobile advertising is (would be) convenient because it allows access to information on the move and to always have my discount coupons at hand.	O	O	O	O	O	O	O
43	Being subscribed to mobile advertising is (would be) useful for communicating with other people (e.g. having information about new places to go to, conversation topic)	O	O	O	O	O	O	O

		Strongly disagree	Moderately disagree	Slightly disagree	Neither agree nor disagree	Slightly agree	Moderately agree	Strongly agree
44	I think that receiving advertisements though my mobile phone is (would be) an enjoyable and fun experience.	O	O	O	O	O	O	O
45	For me, receiving mobile advertisements by SMS is (would) sometimes be a disappointing experience because I would not be able to distinguish it from a personal message.	O	O	O	O	O	O	O
46	Mobile advertisements (would) often disturb me from other activities.	O	O	O	O	O	O	O
47	Mobile advertising irritates (would irritate) me because it interrupts usage of the phone's primary functions.	O	O	O	O	O	O	O
48	Mobile advertising is useless because most of the information provided through mobile advertising is (would be) irrelevant to my interests.	O	O	O	O	O	O	O
49	Receiving mobile advertising is (would be) too tiresome and time-consuming.	O	O	O	O	O	O	O
50	I think I may get charged for using some mobile advertisements (e.g. clicking on a mobile internet link). Therefore, I consider mobile advertising risky in this regard.	O	O	O	O	O	O	O
51	I do not think mobile advertising is safe because of possible data privacy violation risks	O	O	O	O	O	O	O

		Strongly disagree	Moderately disagree	Slightly disagree	Neither agree nor disagree	Slightly agree	Moderately agree	Strongly agree
52	I think people who are subscribed to mobile advertising are knowledgeable because they stay constantly updated about new places and events.	O	O	O	O	O	O	O
53	I think people who are subscribed to mobile advertising are energetic and socially active.	O	O	O	O	O	O	O
54	I think mobile advertising is for innovative people who are fashionable and like to try new things.	O	O	O	O	O	O	O
55	If other people know that I am subscribed to mobile advertising to receive discount vouchers or other rewards they may perceive me as a too money-conscious person.	O	O	O	O	O	O	O
56	If other people know that I am subscribed to mobile advertising to receive discount vouchers or other rewards they may think I am having financial troubles.	O	O	O	O	O	O	O
57	If other people know that I am subscribed to mobile advertising they may think that I have too much free time.	O	O	O	O	O	O	O
58	In general, I am among the first in my circle of friends to buy a new mobile application when it appears.	O	O	O	O	O	O	O

		Strongly disagree	Moderately disagree	Slightly disagree	Neither agree nor disagree	Slightly agree	Moderately agree	Strongly agree
59	If I heard that a new mobile application was available in the store, I would be interested enough to try it.	O	O	O	O	O	O	O
60	Compared to my friends, I own a lot of mobile applications.	O	O	O	O	O	O	O
61	In general, I am the first in my circle of friends to know any new mobile application.	O	O	O	O	O	O	O
62	I will not try a new mobile application if have not heard of it before.	O	O	O	O	O	O	O
63	I know about new mobile applications before most other people in my circle do.	O	O	O	O	O	O	O

Thank you for your participation in this study.

APPENDIX 4: Final questionnaire

==========
Mobile Advertising Survey
==========
Organisation: Durham University

Purpose: This survey will be used as part of a thesis for a DBA. The purpose of this survey is to collect data on various aspects of consumer behaviours towards advertising via mobile phones.

PLEASE READ THE FOLLOWING NOTES BEFORE COMPLETING THE QUESTIONNAIRE:

- In this survey the term "mobile advertising" refers only to advertising via mobile phones.
- To subscribe/opt-in for mobile advertising means to agree to receive promotional information on your mobile phone and to grant the advertiser or your mobile service provider permission to send you promotional information.
- Mobile advertising may be delivered to you in different formats:

    4. *In-application mobile advertising (e.g. branded games/applications)*
    5. *Mobile SMS/MMS advertising*
    6. *Mobile Video advertising*

Your responses will be treated as confidential, i.e. the survey results will be reported in aggregate only and no individual details will be disclosed.

Thank you for your participation in this study.

Section 1

1. Over the past 12 months, to how many companies have you given permission to send you promotional information via mobile phone?

   ( ) More than 10
   ( ) 6-10
   ( ) 3-5
   ( ) Less than 2
   ( ) None (if none please proceed to Question 4)

2. How would you describe your experiences with mobile advertising BEFORE you opted-in for mobile advertising for the first time (e.g. indirect experience or general impression from media)?

   ( ) Very negative
   ( ) Generally negative
   ( ) Somewhat negative
   ( ) Neither positive nor negative
   ( ) Somewhat positive
   ( ) Generally positive
   ( ) Very positive

3. How would you describe your experiences with the COMPANY to whose mobile advertising you opted-in BEFORE you opted-in for their mobile advertising?

   ( ) Very negative
   ( ) Generally negative
   ( ) Somewhat negative
   ( ) Neither positive nor negative
   ( ) Somewhat positive
   ( ) Generally positive
   ( ) Very positive

4. Will you subscribe to mobile advertising in future?

   ( ) Yes
   ( ) Maybe/Not sure
   ( ) No

Section 2

Please indicate your agreement or disagreement with the following statements:

		Strongly disagree	Moderately disagree	Slightly disagree	Neither agree nor disagree	Slightly agree	Moderately agree	Strongly agree
5	It is likely that I will opt-in for mobile advertising if the advertisement content is relevant to my interests.	O	O	O	O	O	O	O
6	It is likely that I will opt-in for mobile advertising if the advertisements contain some practical information about product prices and ongoing offers.	O	O	O	O	O	O	O
7	For me to opt-in for mobile advertising, it has to be entertaining and fun to use.	O	O	O	O	O	O	O
8	I would be tempted to opt-in for mobile advertising if the advertisements are colourful and well-designed.	O	O	O	O	O	O	O
9	It is unlikely that I opt-in for mobile advertising if the advertisements are going to be long	O	O	O	O	O	O	O
10	If my family and friends opt-in for mobile advertising, it is likely that I will try mobile advertising too.	O	O	O	O	O	O	O
11	Knowing that mobile advertising is popular in my community would make me more likely to opt-in for it.	O	O	O	O	O	O	O

		Strongly disagree	Moderately disagree	Slightly disagree	Neither agree nor disagree	Slightly agree	Moderately agree	Strongly agree
12	For me, the most likely time to subscribe to mobile advertising is when I am not busy (e.g. lunch breaks, holidays, weekends)	O	O	O	O	O	O	O
13	For me, the most likely time to subscribe to mobile advertising is when I look for that kind of information (e.g. collect information about a certain product)	O	O	O	O	O	O	O

		Strongly disagree	Moderately disagree	Slightly disagree	Neither agree nor disagree	Slightly agree	Moderately agree	Strongly agree
14.	For me to opt-in for mobile advertising, I need to be able to control and put restrictions on the advertisements' delivery times.	O	O	O	O	O	O	O
15.	If I am offered to subscribe to mobile advertising during holiday/sale season or other periods of intensive shopping it is likely that I will opt-in for it.	O	O	O	O	O	O	O
16.	I will refuse to opt-in for mobile advertising if I need to download additional software to receive those advertisements.	O	O	O	O	O	O	O
17.	I will not subscribe to mobile advertising if I need to complete an application/ registration form to use it.	O	O	O	O	O	O	O
18.	If subscription to mobile advertising requires me to sign a contract with the advertiser specifying general conditions of this service I will not to opt-in for it.	O	O	O	O	O	O	O
19.	If subscription to mobile advertising requires me to provide additional details about myself I will refuse to subscribe to it.	O	O	O	O	O	O	O
20.	If I subscribed to mobile advertising some time before and liked that experience it is likely that I will opt-in for it again.	O	O	O	O	O	O	O

		Strongly disagree	Moderately disagree	Slightly disagree	Neither agree nor disagree	Slightly agree	Moderately agree	Strongly agree
21.	If I am offered to subscribe to mobile advertising by a company I know and had good experiences with before, it is likely that I will agree to receive mobile advertisements from them.	O	O	O	O	O	O	O

Section 3

Please indicate your agreement or disagreement with the following statements:

		Strongly disagree	Moderately disagree	Slightly disagree	Neither agree nor disagree	Slightly agree	Moderately agree	Strongly agree
22.	In general, I am among the last in my circle of friends to start using a new mobile application when it appears.	O	O	O	O	O	O	O
23.	If I heard that a new mobile application was available I would be interested enough to try it.	O	O	O	O	O	O	O
24.	Compared to my friends, I use very few mobile applications	O	O	O	O	O	O	O
25.	In general, I am the first in my circle of friends to know any new mobile applications.	O	O	O	O	O	O	O
26.	I will not try a new mobile application if I have not heard of it before.	O	O	O	O	O	O	O
27.	I know about new mobile application models before most other people do	O	O	O	O	O	O	O

Section 4

Please indicate your agreement or disagreement with the following statements:

		Strongly disagree	Moderately disagree	Slightly disagree	Neither agree nor disagree	Slightly agree	Moderately agree	Strongly agree
28	Mobile advertising helps (would help) me to save time when searching for information.	O	O	O	O	O	O	O
29	Mobile advertising helps (would help) me to fill time when bored.	O	O	O	O	O	O	O
30	Mobile advertising helps (would help) me to save money by sending real-time sale/bargain alerts about products/services I am interested in.	O	O	O	O	O	O	O
31	Mobile advertising helps (would help) me to save money because I (would) get discount vouchers and other rewards for viewing ads.	O	O	O	O	O	O	O
32	Mobile advertising provides (would provide) information highly relevant to my interests and preferences.	O	O	O	O	O	O	O
33	Mobile advertising is (would be) convenient because I can (would be able to) receive information on the move and have my vouchers at hand whenever I need them.	O	O	O	O	O	O	O

		Strongly disagree	Moderately disagree	Slightly disagree	Neither agree nor disagree	Slightly agree	Moderately agree	Strongly agree
34	Mobile advertising provides (would provide) useful information for communicating with other people (e.g. having ideas on where to go, conversation topic).	O	O	O	O	O	O	O
35	Mobile advertising is (can be) fun to use.	O	O	O	O	O	O	O
36	People who are subscribed to mobile advertising are knowledgeable because they stay updated about new places and events.	O	O	O	O	O	O	O
37	People who are subscribed to mobile advertising are energetic and socially active.	O	O	O	O	O	O	O
38	People who are subscribed to mobile advertising are innovative and fashionable.	O	O	O	O	O	O	O

Section 5

Please indicate your agreement or disagreement with the following statements

		Strongly disagree	Moderately disagree	Slightly disagree	Neither agree nor disagree	Slightly agree	Moderately agree	Strongly agree
39	Receiving a mobile advertisement message when expecting a personal message makes (would make) me feel disappointed.	O	O	O	O	O	O	O
40	Mobile advertisements interrupt (would interrupt) me from other activities.	O	O	O	O	O	O	O
41	Mobile advertisements interrupt (would interrupt) the use of primary mobile phone functions.	O	O	O	O	O	O	O
42	Mobile advertisements contain (would contain) useless information irrelevant to my interests.	O	O	O	O	O	O	O
43	Subscribing to mobile advertising is (would be) a waste of my time. .	O	O	O	O	O	O	O
44	I think I might get charged extra for using some mobile advertisements (e.g. clicking on an Internet link in a message). Therefore, I consider mobile advertising risky in that respect.	O	O	O	O	O	O	O
45	I do not think subscribing to mobile advertising is safe. There might be data privacy violations.	O	O	O	O	O	O	O

		Strongly disagree	Moderately disagree	Slightly disagree	Neither agree nor disagree	Slightly agree	Moderately agree	Strongly agree
46	If other people know that I subscribed to mobile advertising to receive discounts/vouchers they may perceive me as a too money-conscious person.	O	O	O	O	O	O	O
47	If other people know that I subscribed to mobile advertising to receive discounts/ vouchers they may think I am having some financial difficulties.	O	O	O	O	O	O	O
48	If other people know that I subscribed to it to receive discounts/vouchers they may think I have too much free time on my hands and not doing anything productive with myself.	O	O	O	O	O	O	O

Section 6

Please read the scenarios below carefully and indicate whether or not you would opt-in for mobile advertising in each of the described situations.

49	• You are doing your shopping at Harrods with someone you want to impress. Having finished your shopping, you are paying for your items at the till. The cashier offers to enroll you into their "VIP mobile citizen" programme. This includes receiving personalised offers and VIP invitations to upcoming in-store events via mobile phone.	**( ) Opt-in**	**( ) Reject**
50	• You and your family members are fans of Formula 1 motor racing. This year you decided to take them for a treat to attend a prestigious F1 World Grand Prix event. This includes staying in a luxury hotel for 4 nights, attending practice and qualification sessions, the Grand Prix and a cocktail after-party. On your first day there, you notice a poster announcing the option of subscribing to mobile advertisements from the event organisers. Subscription includes receiving real-time mobile alerts about ongoing offers for visitors, updates on current on-site events and special offers from the event sponsors.	**( ) Opt-in**	**( ) Reject**
51	• You are at home on a Saturday night, watching X-Factor, as you usually do. You can vote for your favourite contestant by sending a text message to the show. By doing so, you are giving X-Factor permission to send commercial information to your mobile phone (e.g. X-Factor competitions, concerts in your area, upcoming CD releases). However, if you do not want to receive such information through your phone you can immediately unsubscribe by sending them a text message- no strings attached.	**( ) Opt-in**	**( ) Reject**
52	• You are on a three hour Durham-London train journey. While on the train you have an option to use free Mobile TV that is being broadcasted to passengers. However, the access and use of this service is conditioned on your subscription to receive mobile advertisements from the train company.	**( ) Opt-in**	**( ) Reject**
53	• You are offered to subscribe to charity mobile advertising where your reward for receiving advertisements would go to the charity you support. The more advertisements you receive, the more money will be donated to that charity.	**( ) Opt-in**	**( ) Reject**
54	• You are offered to subscribe to collect air miles by subscribing to mobile advertising from KLM. The more advertisements you receive from them, the more air miles you accumulate.	**( ) Opt-in**	**( ) Reject**
55	• The cashier at your local grocery store offers you an opportunity to subscribe to their mobile advertisements. The advertisements will contain information about the products you regularly buy at that store.	**( ) Opt-in**	**( ) Reject**
56	• You use credit card and make credit repayments every month. Having switched to mobile banking, you are now managing your bills through your bank's secure mobile portal. However, the use of credit card repayment system on the portal is conditioned on you subscribing to mobile advertisements from your bank.	**( ) Opt-in**	**( ) Reject**

Section 7

57. Please indicate your gender
    ( ) Male
    ( ) Female
    ( ) Prefer not to state

58. Please select your age group from the following:
    ( ) 18-24
    ( ) 25-34
    ( ) 35-44
    ( ) 45-54
    ( ) 55-64
    ( ) 65+
    ( ) Prefer not to state

59. What is your total household income? Please include the income of all earners in your household.
    ( ) Under £10,000
    ( ) £10,001-20,000
    ( ) £20,001-£30,000
    ( ) £30,001-£40,000
    ( ) £40,001-£50,000
    ( ) £50,001-£60,000
    ( ) More than £60,000
    ( ) Prefer not to state

60. Please indicate your occupation
    ( ) Admin/clerical
    ( ) Manual
    ( ) Professional
    ( ) Full-time student
    ( ) Self-employed
    ( ) Not working (housewife/retired)
    ( ) Unemployed
    ( ) Prefer not to state
    ( ) Other/Please specify

==========

Thank you for your participation in this study.

==========

APPENDIX 6: Response sheet

Organisation: Durham University

Purpose: This study will be used as part of a thesis for a DBA. The purpose of this study is to collect data on various aspects of consumer behaviours towards mobile phone services.

Your responses will be treated as confidential, i.e. the survey results will be reported in aggregate only and no individual details will be disclosed

Thank you for your participation in this study.

SITUATION 1

1. ***Please describe your feelings using the adjective pairs below.***

Happy	___:	___:	___:	___:	___:	___:	___:	___:	___	Unhappy
Pleased	___:	___:	___:	___:	___:	___:	___:	___:	___	Annoyed
Satisfied	___:	___:	___:	___:	___:	___:	___:	___:	___	Unsatisfied
Contended	___:	___:	___:	___:	___:	___:	___:	___:	___	Melancholic
Hopeful	___:	___:	___:	___:	___:	___:	___:	___:	___	Despairing
Relaxed	___:	___:	___:	___:	___:	___:	___:	___:	___	Bored
Stimulated	___:	___:	___:	___:	___:	___:	___:	___:	___	Relaxed
Excited	___:	___:	___:	___:	___:	___:	___:	___:	___	Calm
Frenzied	___:	___:	___:	___:	___:	___:	___:	___:	___	Sluggish
Jittery	___:	___:	___:	___:	___:	___:	___:	___:	___	Dull
Wide-awake	___:	___:	___:	___:	___:	___:	___:	___:	___	Sleepy
Aroused	___:	___:	___:	___:	___:	___:	___:	___:	___	Unaroused
Controlling	___:	___:	___:	___:	___:	___:	___:	___:	___	Controlled
Dominant	___:	___:	___:	___:	___:	___:	___:	___:	___	Submissive
Influential	___:	___:	___:	___:	___:	___:	___:	___:	___	Influenced
Important	___:	___:	___:	___:	___:	___:	___:	___:	___	Awed
Autonomous	___:	___:	___:	___:	___:	___:	___:	___:	___	Guided
In control	___:	___:	___:	___:	___:	___:	___:	___:	___	Cared for

2. ***Imagining you are in that situation, please make a decision.***

Would you take this offer in this situation?

( ) Yes ( ) No

SITUATION 2

3. Please describe your feelings using the adjective pairs below.

Happy	___:	___:	___:	___:	___:	___:	___:	___:	___	Unhappy
Pleased	___:	___:	___:	___:	___:	___:	___:	___:	___	Annoyed
Satisfied	___:	___:	___:	___:	___:	___:	___:	___:	___	Unsatisfied
Contended	___:	___:	___:	___:	___:	___:	___:	___:	___	Melancholic
Hopeful	___:	___:	___:	___:	___:	___:	___:	___:	___	Despairing
Relaxed	___:	___:	___:	___:	___:	___:	___:	___:	___	Bored
Stimulated	___:	___:	___:	___:	___:	___:	___:	___:	___	Relaxed
Excited	___:	___:	___:	___:	___:	___:	___:	___:	___	Calm
Frenzied	___:	___:	___:	___:	___:	___:	___:	___:	___	Sluggish
Jittery	___:	___:	___:	___:	___:	___:	___:	___:	___	Dull
Wide-awake	___:	___:	___:	___:	___:	___:	___:	___:	___	Sleepy
Aroused	___:	___:	___:	___:	___:	___:	___:	___:	___	Unaroused
Controlling	___:	___:	___:	___:	___:	___:	___:	___:	___	Controlled
Dominant	___:	___:	___:	___:	___:	___:	___:	___:	___	Submissive
Influential	___:	___:	___:	___:	___:	___:	___:	___:	___	Influenced
Important	___:	___:	___:	___:	___:	___:	___:	___:	___	Awed
Autonomous	___:	___:	___:	___:	___:	___:	___:	___:	___	Guided
In control	___:	___:	___:	___:	___:	___:	___:	___:	___	Cared for

4. Imagining you are in that situation, please make a decision.

Would you take this offer in this situation?

( ) Yes ( ) No

SITUATION 3

5. Please describe your feelings using the adjective pairs below.

Happy	___:	___:	___:	___:	___:	___:	___:	___:	___	Unhappy
Pleased	___:	___:	___:	___:	___:	___:	___:	___:	___	Annoyed
Satisfied	___:	___:	___:	___:	___:	___:	___:	___:	___	Unsatisfied
Contended	___:	___:	___:	___:	___:	___:	___:	___:	___	Melancholic
Hopeful	___:	___:	___:	___:	___:	___:	___:	___:	___	Despairing
Relaxed	___:	___:	___:	___:	___:	___:	___:	___:	___	Bored
Stimulated	___:	___:	___:	___:	___:	___:	___:	___:	___	Relaxed
Excited	___:	___:	___:	___:	___:	___:	___:	___:	___	Calm
Frenzied	___:	___:	___:	___:	___:	___:	___:	___:	___	Sluggish
Jittery	___:	___:	___:	___:	___:	___:	___:	___:	___	Dull
Wide-awake	___:	___:	___:	___:	___:	___:	___:	___:	___	Sleepy
Aroused	___:	___:	___:	___:	___:	___:	___:	___:	___	Unaroused
Controlling	___:	___:	___:	___:	___:	___:	___:	___:	___	Controlled
Dominant	___:	___:	___:	___:	___:	___:	___:	___:	___	Submissive
Influential	___:	___:	___:	___:	___:	___:	___:	___:	___	Influenced
Important	___:	___:	___:	___:	___:	___:	___:	___:	___	Awed
Autonomous	___:	___:	___:	___:	___:	___:	___:	___:	___	Guided
In control	___:	___:	___:	___:	___:	___:	___:	___:	___	Cared for

6. Imagining you are in that situation, please make a decision.

Would you take this offer in this situation?

( ) Yes ( ) No

SITUATION 4

7. Please describe your feelings using the adjective pairs below.

Happy	___:	___:	___:	___:	___:	___:	___:	___:	___	Unhappy
Pleased	___:	___:	___:	___:	___:	___:	___:	___:	___	Annoyed
Satisfied	___:	___:	___:	___:	___:	___:	___:	___:	___	Unsatisfied
Contended	___:	___:	___:	___:	___:	___:	___:	___:	___	Melancholic
Hopeful	___:	___:	___:	___:	___:	___:	___:	___:	___	Despairing
Relaxed	___:	___:	___:	___:	___:	___:	___:	___:	___	Bored
Stimulated	___:	___:	___:	___:	___:	___:	___:	___:	___	Relaxed
Excited	___:	___:	___:	___:	___:	___:	___:	___:	___	Calm
Frenzied	___:	___:	___:	___:	___:	___:	___:	___:	___	Sluggish
Jittery	___:	___:	___:	___:	___:	___:	___:	___:	___	Dull
Wide-awake	___:	___:	___:	___:	___:	___:	___:	___:	___	Sleepy
Aroused	___:	___:	___:	___:	___:	___:	___:	___:	___	Unaroused
Controlling	___:	___:	___:	___:	___:	___:	___:	___:	___	Controlled
Dominant	___:	___:	___:	___:	___:	___:	___:	___:	___	Submissive
Influential	___:	___:	___:	___:	___:	___:	___:	___:	___	Influenced
Important	___:	___:	___:	___:	___:	___:	___:	___:	___	Awed
Autonomous	___:	___:	___:	___:	___:	___:	___:	___:	___	Guided
In control	___:	___:	___:	___:	___:	___:	___:	___:	___	Cared for

8. Imagining you are in that situation, please make a decision.

Would you take this offer in this situation?

( ) Yes ( ) No

Section 2

Please indicate your agreement or disagreement with each of the following statements

	Statement	Strongly disagree	Moderately disagree	Slightly disagree	Neither agree nor disagree	Slightly agree	Moderately agree	Strongly agree
1	In general, I am among the last in my circle of friends to start using a new mobile application when it appears.	O	O	O	O	O	O	O
2	If I heard that a new mobile application was available I would be interested enough to try it.	O	O	O	O	O	O	O
3	Compared to my friends, I use very few mobile applications.	O	O	O	O	O	O	O
4	In general, I am the first in my circle of friends to know any new mobile applications.	O	O	O	O	O	O	O
5	I will not try a new mobile application if have not heard of it before.	O	O	O	O	O	O	O
6	I know about new mobile applications before most other people do.	O	O	O	O	O	O	O

Section 3

1. Please indicate your gender

   ( ) Male ( ) Female ( ) Prefer not to state

2. Please select your age group from the following:

   ( ) 18-24 ( ) 25-34 ( ) 35-44 ( ) 45-54

   ( ) 55-64 ( ) 65+ ( ) Prefer not to state

Thank you for your participation in this study!

APPENDIX 7: PAD scale translation

English instrument	Russian version	Back translation A	Back translation B
Happy-Unhappy	Довольный - Недовольный	Pleased-Displeased	Pleased-Displeased
Contented-Melancholic	Радостный– Грустный	Joyful-Sad	Happy-Sad
Satisfied-Unsatisfied	Удовлетворенный- Неудовлетворенный	Satisfied- Dissatisfied	Satisfied- Dissatisfied
Pleased- Annoyed	Довольный- Раздраженный	Pleased- Annoyed	Pleased-Annoyed
Hopeful-Despairing	Полный надежд - Отчаявшийся	Optimistic- Despaired	Hopeful-Despaired
Relaxed-Bored	Расслабленный- Скучающий	Relaxed-Bored	Relaxed-Bored
Stimulated-Relaxed	Стимулированный - Расслабленный	Stimulated-Relaxed	Stimulated-Relaxed
Excited-Calm	В предвкушении- Спокойный	In anticipation-Calm	In excitement- Calm
Frenzied-Sluggish	Взбешенный - Бездеятельный	Furious- Passive	Furious-Sluggish
Jittery-Dull	Взвинченный - Вялый	Anxious-Sluggish	Nervous-Languid
Wide-awake -Sleepy	Бодрый- Сонный	Awake-Sleepy	Awake-Sleepy
Aroused-Unaroused	Мотивированный – Безразличный	Motivated-Indifferent	Motivated-Indifferent
Controlling- Controlled	Контролирующий - Контролируемый	Controlling-Controlled	Controlling- Controlled
Influential- Influenced	Влиятельный - Подвергающийся влиянию	Influential- Influenced	Influential- Influenced
In control- Cared for	Руководящий - Руководимый	Managing-Subordinate	Governing-Governed
Important- Awed	Важный- незначительный **1**	Important- Awe-struck	Important- In awe
Dominant-Submissive	Доминирующий- Покорный	Dominating-Obedient	Dominating-Submissive
Autonomous-Guided	Самостоятельный-Ведомый	Self-dependent-Dependent	Independent-Dependent

[1] «незначительный» was initially translated as "В благоговейном трепете" but after pre-test revealed that people felt confused and uncomfortable with the original translation, it was changed to «незначительный».

Out of the 36 items, 10 items required language adaptations:

1) First, in Russian as opposed to English language, words "happy" and "unhappy" have different connotations. Whereas in English a word "happy" can be applied to a wide variety of pleasing situations (e.g. "He was quite happy with his essay grade"), a literal translation of the word "happy" ("счастливый") may imply either an *extreme* level of happiness or a general *state* of happiness (i.e. being absolutely satisfied with everything in one's life) or it can be used as a synonym for the word "lucky" (e.g. lucky coin).

2) Similarly, the word "unhappy" ("несчастный") bears a heavier meaning in Russian than in English. Whereas in English it can be used to express even a slight displeasure (e.g. "I was unhappy about his behaviour yesterday"), in Russian, unhappiness is understood as either a state experienced in life-breaking dramatic situations or as a synonym of "poor" or "unlucky". Hence, the pair was substituted with "довольный-недовольный" (pleased-displeased) which is the closest semantic equivalent of "happy-unhappy".

3) whereas in English "melancholic" can be understood as both temporal mood and personality type, in Russian language, being "melancholic" ("меланхоличный/меланхолический") is used only to refer to personality types. Therefore, this word has been changed to "sad".

4) Also, as there is no adjectival equivalent of the word "contented" in the Russian language, the word "contented" has been changed to an English equivalent of "joyful".

5,6) Since in Russian language, just like in Spanish (Yani-de-Soriano & Foxall, 2002) words "aroused" and "excited" both have sexual connotations the words have also been changed. "Excited" has been changed to "в предвкушении" which is literally translated as "in anticipation" but has a more positive and emotionally charged tone to it[1]. "Aroused" has been replaced with "мотивированный" or "motivated".

7) As a Russian equivalent of "unaroused" did not exist and translation of "unaroused" as "не мотивирован" ("not motivated") would result in a weaker connotation (i.e. being not motivated *enough* rather than not motivated at all as in "unaroused"), "unaroused" has been replaced with it the closest semantic equivalent "безразличный" ("indifferent"). In the pair "in control-cared for" both words required language adjustments.

8,9) As the words "in control" do not have an equivalent in Russian, both "in control" and "controlling" could only be translated into Russian as "контролирующий" ("controlling"). To avoid repetition, "in control" has been replaced with "руководящий" ("governing"). "Cared-for" has been replaced with "руководимый" ("governed") because its direct translation as "опекаемый" would not communicate the intended idea.

10) Finally, since the word "autonomous" ("автономный") is rarely used for human beings in Russian language, it has been replaced with "самостоятельный" ("self-dependent") which is its closest equivalent.

[1] *Whereas in English, one can anticipate both bad and good events, in Russian language, "в предвкушении" can only be used when one is waiting for good things to happen. Also, in English, while anticipation implies reasoned expectation that can lack in emotions, in Russian, a person who is "в предвкушении" is eagerly and happily awaiting something.*

APPENDIX 8: DSI scale translation

English Instrument	Russian Version	Back Translation 1	Back Translation 2
In general, I am among the last in my circle of friends to start using a new mobile application when it appears.	В основном, я одним(-ой) из последних в группе своих друзей начинаю пользоваться нововышедшей прикладной программой для мобильных телефонов.	*For the most part, I am one of the last among my friends to start using a newly released mobile phone application.*	*Usually I am one of the last in my group of friends to start using a new application for mobile phones.*
If I heard that a new mobile application was available I would be interested enough to try it.	Если я услышу, что стала доступна новая прикладная программа для мобильных телефонов, я буду достаточно заинтересован(-а) в том, чтобы ее опробовать.	*If I become aware that a new mobile phone application is available I will be quite keen to try using it.*	*If I hear that a new application for mobile phones is available, I will be interested enough to try it out.*
Compared to my friends, I use very few mobile applications.	По сравнению со своими друзьями, я пользуюсь очень небольшим количеством прикладных программ для мобильных телефонов.	*In comparison to my friends, I use a very small number of mobile phone applications.*	*Compared to my friends, I use a very small number of applications for mobile phones.*
In general, I am the first in my circle of friends to know any new mobile applications.	В основном, я первым(-ой) в группе своих друзей узнаю о новых прикладных программах для мобильных телефонов.	*For the most part, I am the first one among my friends to know about new mobile phone applications.*	*I am usually the first in my group of friends to know about new applications for mobile phones.*
I will not try a new mobile application if have not heard of it before.	Я не стану пробовать новую прикладную программу для мобильных телефонов, если раньше о ней не слышал (-а)	*I will not try a new mobile phone application unless I heard about it before.*	*I will not try a new application for mobile phones if I have not heard about it before.*
I know about new mobile applications before most other people do.	Я узнаю о новых прикладных программах для мобильных телефонов раньше, чем большинство других людей.	*I am usually ahead of majority of other people in knowing about new mobile phone applications.*	*Usually I know about new applications for mobile phones earlier than vast majority of others.*