

User Behavior in Ubiquitous Online Environments

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Yuuki Kato, Sagami Women's University, Japan

Shogo Kato, Tokyo Woman's Christian University, Japan

Kunihiro Chida, Toei Animation Co., Ltd., Japan

This study investigates the timing of replies to mobile phone text messages focusing especially on the timing of replies from the perspective of the “recipient” of the message. In a previous study, the authors evaluated the timing of replies and the emotional strategies associated with such timing from the perspective of the “sender” and found they employed an emotional strategy whereby they “waited” before responding to mobile text messages in order to continue positive communication. In the present study, they examine if the same strategy is as effective from the perspective of recipients of the messages. Specifically, study participants were asked by questionnaire to rate what emotions they would feel and to what degree when the other party waited before replying to the mobile text messages the participants had sent, where the message sent had conveyed one of four emotions: happiness, sadness, anger, or guilt. These four emotional scenarios are the same as used in the previous study to allow for comparative analysis of the two studies. Additionally, participants in the present study were asked to provide freeform responses for scenarios where they felt it was desirable to wait before replying themselves. The results show differences between the emotional strategic intent of senders for waiting before replying, as determined in the previous study, and how this is perceived by the recipients. The results suggest that there are gaps in perception between senders and recipients regarding the intentional manipulation of reply timing (especially waiting before replying). One suggested gap is that senders that intentionally manipulate the timing of replies for negative or hostile emotions, such as sadness, anger, or guilt, run the risk of making the recipient feel the opposite of the sender’s intended outcome.

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Yuanxin Wang, Temple University, USA

This chapter examines how local residents were informed and rallied by the Internet and mobile phone messages for an unprecedented protest against the construction of a hazardous chemical plant in Xiamen, China, and how the municipal government responded by encouraging public participation in environmental decision making via the same communicational platforms. Using combined research methods including interviews and secondary data analysis, this research investigates the role of the Internet and cell phone message in mobilizing the general public to participate in the environmental protection movement in China. The role of Word Of Mouth (WOM) in the environmental movement is discovered for the first time. The unique mechanism of cellular telephones and the Internet in public participation involving multiple stakeholders in China's environmental policy-making process is also discussed.

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Ubiquitous Computing in the Cloud: User Empowerment vs. User Obsequity 44

Primavera De Filippi, Université Paris II, France

This chapter analyses the evolution of the Internet, shifting from a decentralized architecture designed around the end-to-end principle with powerful mainframe/personal computers at each end, to a more centralized network designed according to the mainframe model, with increasingly weaker user's devices that no longer have the ability to run a server nor to process any consistent amount of data or information. The advantages of ubiquitous computing (allowing data to become available from anywhere and at any time regardless of the device) should thus be counterbalanced with the costs it entails (loss of users' autonomy, concerns as regards privacy, and freedom of expression, etc.).

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Valérie Fernandez, TélécomParis Tech, France

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In this chapter, the authors present the project "WITE 2.0." This project is at the crossroads of various issues related to mobility (Urry, 2007) and use of Information and Communication Technologies. WITE 2.0 is a part of the designing process of a collaborative communication tool: "a virtualized and unified platform." The authors define scenarios of teleworking practices, "equipped" by ICTs, and use these scenarios to better specify the platform. The project started at the end of 2010 and continued for a period of 18 months. The analysis is based on several complementary methodologies: a qualitative study (47 semi-structured interviews) and an experimentation of the platform. They present the main results of the interview survey through the following themes: remote management, skills, articulation of private and professional spheres, and the maturity of technologies. The authors also describe how these elements help the understanding of the evolution of workers' practices.

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Shang Gao, Zhongnan University of Economics and Law, China

Little research has been done to explore the adoption of mobile information services from a cultural perspective. This research is designed to study mobile information services adoption from a cultural perspective. Based on the two cultural dimensions (individualism/collectivism, uncertainty avoidance), two research hypotheses are presented. To examine these hypotheses, an exploratory study is carried out with a mobile information service called Mobile Tourist Service Recommender (MTSR) system with both respondents from developed countries and China. According to the results, one research hypothesis is supported, while the other research hypothesis (H1) is not supported in this exploratory study. The findings indicate that the cultural dimensions play important roles in how mobile information services are used and adopted in two different cultural settings: culture in developed countries and the Chinese culture. The results also highlight the relevance of the cultural dimensions (individualism/collectivism, uncertainty avoidance) as the factors affecting the adoption of mobile information services.

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Anna Kasimati, University of Piraeus, Athens

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The rise of mobile broadband devices and services has significantly changed the role of mobile devices in people's daily lives by enabling the provision of innovative applications and services anywhere, anytime. Despite the fact that new ideas and innovation mainly occur within Higher Education Institutions (HEIs), the adoption of mobile and ubiquitous technologies by HEIs is still in its early stages. This chapter attempts to provide a framework to support Higher Education Institutions towards implementing mobile and ubiquitous, game-based learning activities. Aligned with the objective of this book, this chapter presents some examples and best practices of implementing this framework towards achieving the learning goals of future professionals in the fields of electronic and ubiquitous commerce.

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The Role of Communication in Online Trust: The Communicative Action Theory Contribution 130

Latifa Chaari, Higher Institute of Management of Tunis, Tunisia

This chapter aims at better understanding the behavior of the Internet user. It suggests studying the role of communication on the trust of Internet users towards commercial Websites. In order to realize this research, the authors mobilized the Communicative Action Theory of Jürgen Habermas (1987). Therefore, they have brought a new perspective in understanding online trust following action theory. For Habermas, communication is an action that depends on contextual, cultural, and human factors, which cannot be reduced to deterministic mechanisms. He deals with three types of action, which an actor might pursue following his interests, which can be instrumental, strategic, or emancipatory. The instrumental and

strategic are purposive-rational actions, which aim at achieving success and at developing a calculated trust based on calculation of the advantages and the costs of the relation, whereas, the communicative action is coordinated by mutual understanding that allows the development of a relational trust based on social interactions. In communicative action, mutual understanding through language allows the social integration of actors and the coordination of their plans and their different interests. In this case, trust is based on a common definition of the situation and the resolution of conflicts of interests between actors. Internet is a medium of communication that can support the three kinds of action. The instrumental and strategic actions allow the development of calculated trust, whereas the communicative action allows the development of relational trust based on social interaction and mutual comprehension.

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Vathiswa M. Booï, Tshwane University of Technology, South Africa

George E.M. Ditsa, Tshwane University of Technology, South Africa

There are growing concerns over the user friendliness and other usability issues of South African Universities' Web Portal Interfaces (UWPIS), which obviously will negate the user acceptance of the UWPIS. The main goal of this study is to develop a framework that could be used to evaluate and provide additional guidelines to improve the Usability and User Acceptance of South African UWPIS. The study applies a triangulation of Ubiquitous computing Evaluation Areas (UEAs) and the Technology Acceptance Model (TAM) as theoretical foundations to derive the research model. Multiple regression and stepwise regression analyses are used. The results suggest that Interaction and Invisibility of UWPIS are the most important measures that have a huge impact on user acceptance and usability, respectively. The results of the study provide guidelines for the design and development of South Africa UWPIS to meet their usability and user acceptance.

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Telepresence, Flow, and Behaviour in the Virtual Retail Environment..... 173

Saïd Ettis, University of Gabes, Tunisia

Flow theory, as a basis to facilitate the development of compelling experiences, has received growing attention over the past two decades. Facing this plethora of interest, it is obvious that telepresence and flow in human-computer interactions are important issues. The objectives of this chapter is to review and empirically analyze the relationships among flow theory, the telepresence concept, and online behaviour. Particularly, this research investigates the impact of telepresence and flow on Websites visitors' visit time, perceived visit time, and number of visited pages. An online survey was conducted. The findings indicate that telepresence has a positive effect on the flow state, as measured by concentration and enjoyment. The consumers' level of concentration positively influenced their visit time, perceived visit time, and number of visited pages. Enjoyment has a positive effect on perceived visit time, but no significant effect on actual visit time and number of visited pages. Discussion and implications of these results are exhibited. Suggestions concerning future research are also presented.

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“From Clicks to Taps and Swipes”: Translating User Needs to a Mobile Knowledge Management Experience..... 196

Madhavi M. Chakrabarty, Verizon Wireless, USA

Organizations constantly strive to improve the richness and reach of their knowledge resources to ensure optimal performance of their employees in their job functions. Some of the techniques that organizations have used in the past have included state-of-the-art search engines, creating a directed navigation by mapping content to employee transactions, and incorporating user experience design heuristics. Search engine improvement is reputed to be the most used technique, even though its effectiveness in organizational knowledge management systems has not been confirmed. With more and more organizations now having a mobile employee base, there is now a need to provide employees access to organizational resources anytime and anywhere. This chapter provides insight into some of the challenges in organizational knowledge management systems and the implications of designing a mobile system. It proposes some heuristics on designing a knowledge management system for mobile systems and proposes a framework to validate it against available user acceptance models.

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Understanding Brand Implication and Engagement on Facebook 216

Marie Haikel-Elsabeh, University Paris X, France

What are the drivers for Brand engagement and implication on Facebook? In order to explore the impact of motivations on content and information sharing on Facebook brand pages, this study proposes an analysis focused on a reduced number of motivations and a proposal of a statistical model attempting to link the frequency of posting and liking on Facebook in general and Brand engagement to motivations. The aim of the study is to assess the impact of motivations on brand implication and frequency of posting on Facebook. The authors use the concept of brand implication measure a deep interest toward brands on Facebook. The concept of frequency of posting and liking focuses on the tendency to post or like frequently each time the user connects to Facebook. The motivations the authors introduced are based on the literature for sharing on social networks.

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Foreword

Online communication is not a new phenomenon. However, the ubiquity of online communication is new. Furthermore, the rapid development of ubiquitous online environments caught Internet observers off guard. There was no way to anticipate how the advent of smart cellular telephones and computer tablets would lead to users living online 24/7. Today, individuals and organizations maintain an ongoing online presence as a matter of practice and a lived reality of modern life. Virtual life as a parallel and omnipresent reality has captured the interest of users in both developed and developing countries, of men and women, adults and children, the educated and the learning, the wealthy and the poor. Food, clothing, shelter, and cell phones have become the necessities of modern life.

Indeed, checking online messages (email, Websites, blogs, social media, and so forth) has become ubiquitous in every way. Almost every person on the planet who can financially afford one (and many people who cannot) possess a smart telephone. Users carry their devices with them at all times and sleep with them at their bedsides. These devices are omnipresent; they are out and in use in business meetings, government hearings, courtrooms, classrooms, restaurants, and family dinners. The propensity of users to simultaneously live online and off-line raises a number of questions concerning user behavior that simply could not be observed or studied until the manifestation of the phenomenon itself—in other words until now. The book you hold in your hand is among the first to address questions relevant to this new ubiquity.

The purpose of this book is to examine how ubiquity (a) influences user behavior and, as a result, ultimately (b) influences the mechanisms designed to facilitate user behavior. As with any first effort, the book covers a wide range of relevant topics. Examined issues of ubiquity range from users' motivations to engage with Facebook to the evolution of workers' online practices, from managing mobile employee databases to texting practices on cell phones. By carefully curating examinations of such diverse contexts and issues, the editors allow the reader's focus to remain on the overriding concern of discerning patterns in user behavior in ubiquitous online environments.

The chapter authors appear to achieve the impossible: They provide appropriate theoretical perspectives, employ sound analytic and research methodologies, as well as translate their results into practical advice. Therefore, the book will prove useful for scholars, users, and practitioners who desire to understand the influence of ubiquity on user behavior in private and commercial ventures.

The most impressive feature of this book is its scope. Chapter authors employed multiple sound methodologies (i.e., historical analysis, interviews, online surveys, freeform responses to scenarios, and experimental platforms) to collect data in multiple countries (i.e., China, France, Japan, South Africa, Tunisia, United States of America). The researchers examined many important objects of study:

- Evolution of the Internet.
- Websites including commercial Websites and retailer Websites.
- Web management tools such as corporate knowledge management systems, university Web portals, and collaborative research tools.
- Trends in user behavior such as adoption of mobile information, brand engagement, and the timing of texts.

The book's most impressive scholarly achievement, however, is the examination of a long list of variables containing some classic concerns in studies of online behavior (i.e., telepresence, usability, relational trust, privacy, user-friendliness, uncertainty avoidance) as well as some relative newcomers (e.g., flow, motivations for posting, frequency of posting, sender versus receiver perspectives) in studies that yielded interesting results in the new worldwide ubiquity of online behavior.

Taking the book's body of work as a whole, researchers appear to be moving from assessing individual users' perspectives and behaviors to assessing the interactions (a) between users as well as (b) between users and platforms—an appropriate evolution in assessment, given the tendency in ubiquitous online environments for users to conduct both personal and professional business online. It is important to note that such an observation (the above-described shift in the focus of assessment) could only be achieved by examining a collection such as this—a well selected, edited, and curated collection of original research on user behavior in ubiquitous online environments.

The book contained herein is necessarily limited, given that user behavior in ubiquitous online environments is a relatively new phenomenon and given that the research examining the phenomenon is in its infancy. Nonetheless, this book fills an important scholarly niche by beginning conversations about how to study and adapt to user behavior in ubiquitous online environments. All explorations must begin somewhere, and this book provides a particularly good beginning.

I laud the book editors for beginning the exploration of user behavior in ubiquitous online environments on a multi-national level and with such an impressive collection of research reports. The book captures the current state of knowledge on user behavior in ubiquitous online environments, as each chapter begins with a review of past and relevant research. Equally important, the book “pushes the envelope” of our knowledge and research methods by featuring new and exciting studies of previously unexplored phenomena—research at the heart of this bedeviling, new ubiquity.

In short, this wonderful collection makes an important contribution to both research and practice on the new, exciting subject of user behavior in ubiquitous online environments. This book represents a necessary and appropriate beginning to the scholarly conversation on user behavior in ubiquitous online environments. The editors did a masterful job of beginning to answer important questions about the phenomenon. They did so by collecting, editing, and curating multiple perspectives from multiple countries that speak eloquently to the innovations in user behavior in ubiquitous online environments. Congratulations to Jean-Eric Pelet and Peggy Papadopoulou on an important collection.

Lynne M. Webb

Florida International University, USA

Lynne M. Webb (PhD, University of Oregon, 1980) is Professor of Communication Arts, Florida International University, and J. William Fulbright Master Researcher, University of Arkansas. She has published two scholarly readers, including *Computer Mediated Communication in Personal Relationships*, and over 70 essays including multiple theories, research reports, and pedagogical essays.

Preface

Let's imagine that we are swimming at the swimming pool (see Figure 1), wearing our "Arena Glasses," different than the "Google Glasses" since they can be used beneath the surface of the water, in a zone where WIFI, RFID, Bluetooth, and other wireless communication technologies cannot work. Rather than counting the number of lengths at the pool, the Arena goggles enable me to shop thanks to the virtual reality application, which is used by my preferred brand for shopping food. I can fly in the shelves of the shop like I used to fly in World of Warcraft or Second Life in order to find the best parmesan to accommodate it with my pasta, my dinner of the day. I will then easily find the tomato sauce, since this u-commerce store allows customers to find all they need for a special dish at once, without having to run from one corner of the store to the other one in order to complete the dinner based on pasta, parmesan, and tomato sauce.... This is what could be possible very soon, if technology keeps on progressing this way.

Felix Baumgartner (see Figure 2) was able to send a SMS a few seconds before jumping from the space capsule attached to a giant helium balloon above the so-called "Armstrong Line." There is no phone line in space, but he was able anyway to send SMSs...as he could also do some shopping during these last very intensive minutes before jumping. All this should be possible in a foreseeable future where connectivity will provide broadband Internet access to individuals, even if customers are swimming or trekking in the desert.

This is not a dream, it's a prevision based on the speed of propagation of wireless technologies as well as the progression of the mobile devices we use every day. Progression in terms of energy savings, in terms of performance, in terms of ease of use and usability as well as accessibility, and progression in their capacity to find Internet signals in order to be connected at anytime, almost anywhere...

Figure 1. Swimmer

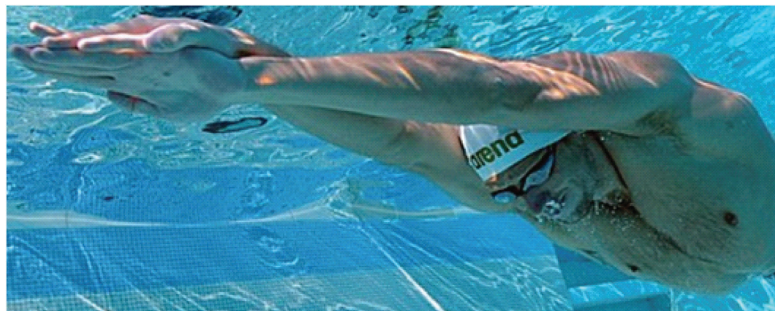


Figure 2. Felix Baumgartner jumps from the space capsule after sending an SMS and doing some shopping on his mobile



This is the theme of this book, dedicated to the next step of the shopping era where after exchanges made from outskirts to centers of town, as explained by Braudel (2008), about the history of capitalism which can be traced back to early forms of merchant capitalism practiced in Western Europe during the Middle Ages, we can now do shopping in our favorite swimming pool in parallel to maintaining our body as healthy as possible.

Ubiquitous is an adjective originated since mid 19th century, from modern Latin *ubiquitas* (from Latin *ubique* ‘everywhere’, from *ubi* ‘where’) which means present, appearing, or found everywhere especially at the same time, according to the Oxford dictionary. Applied to commerce, it can mean that people are able to do shopping anytime, anywhere. This seems difficult to see this in practice since shopping malls and in-store commerce exist in proper places, with no possibilities for consumers to modify the latter, but once it is in relation to the electronic commerce, this assumption becomes possible. Indeed, the progression of technology now enables each of us to conduct transactions with a device which is diversely affordable depending on the region of the world it is sold, according to the exigency of the owner or future owner in terms of design, technical, or network capabilities, but which enables anyone to buy, sell, share, give, steal sometimes, somehow easily. This raises plenty of questions that this book strives to pose as well as to answer. In order to offer the most up to date content to our readers, we conducted a speed process of edition by asking academic authors to provide a chapter on the following topic: “User Behavior in Ubiquitous Online Environments.”

Based on 11 chapters written by 15 authors from 8 countries (Japan, France, China, Greece, South, Africa, Tunisia, USA), during a period of 7 months after release of the call for chapters, this book was written following a usual double (sometimes triple) blind review process, during 3 waves of submissions. In order to keep anonymity for both authors and reviewers, the reviewers have not been apprised of the authors’ names or institutions in the submitted chapters. The aim of the book was to introduce a concept that is still quite new in 2013, which originated from a conversation we had last year with a philosopher about the possibilities of shopping, learning, communicating, and so on in a near future. His answers referred to ubiquity with almost no constraints, enabling consumers with seamless, personalized solutions across the full buying process to shop the way they want, even away from wifi or 3G/4G zones. Indeed, as consumers demand greater access to information, offers, and payment functionality anytime, anywhere, the lines between offline and online shopping, between in-store commerce, e-commerce, and mobile commerce are blurring. This gives the opportunity to evocate ubiquity, in particular to an

academic audience, issued from several fields of study such as marketing, information systems, business and management, media and communication, law, social and economic sciences, computer sciences and knowledge management, and even art. The interested reader is advised to read Kato, Kato, and Chida (2013) for more information on this topic.

The onset of electronic/mobile commerce, electronic/mobile learning, and knowledge management technologies, on screens from desktops and laptops, but also on devices such as smartphones, tablets, watches or glasses, combined with other technologies has an impact on organizations and their relationships within/outside their boundaries. This impact plays in favor of social changes in our western and eastern societies, progressively transforming human beings into ubiquitous human beings.

This edited book intends to assess the impact of u-commerce, u-learning, and u-knowledge management technologies on different organizations, such as online stores, higher education institutions, multinational corporations, health providers, and others. It also integrates multiple theoretical perspectives where they are needed and make industry specific comparisons of e-m-commerce, e-m-learning, and knowledge management technologies and their practices.

Current scholarship on ubiquitous technologies and their impact on user behavior is rather scarce. As ubiquitous online applications are increasingly used in various contexts, new models of user activity emerge. The behavior of users is changed in unprecedented ways that are yet to be explored, as our knowledge with respect to the ubiquitous user is still limited. There is an emerging need for researchers and practitioners to fully understand the potential of ubiquitous environments for successful commercial, educational, entertainment, or any other type of activity, and the changes they impose to existing to user behavior. This book intends to fill this gap, providing a systematic synthesis of the latest research findings and professional experience on ubiquitous online environments and user behavior.

This book aims to provide relevant theoretical frameworks and the latest empirical research findings regarding ubiquitous computing and ubiquitous online environments. It will be valuable to academics and practitioners who want to improve their understanding of the strategic impact of ubiquitous technologies in a wide range of applications and organizations in sectors such as business, commerce, marketing, knowledge management, learning, entertainment, human-computer interaction, and social media. The book aspires to bring together the latest academic research and professional practice, covering all aspects of ubiquitous user activity and behavior in diverse contexts. It thus offers concentrated knowledge and a much needed structured roadmap for studying, planning, and implementing ubiquitous technology strategies for all types of organizations.

The target audience of this book can be composed of researchers and professionals working in the field of marketing, information systems, IT-enabled change, and change management in various disciplines, including library, information, and communication sciences; administrative sciences and management; education; adult education; sociology; computer science; and information technology. Moreover, the book provides insights and support to executives concerned with the management of e- and m-commerce, e- and m-learning, and knowledge management applications, as well as enable the assessment of the organizational impact of such applications in different environments.

The book points to a gradual move from engineering-driven to socioeconomic-focused research about u-commerce. It aims at providing a glimpse into the questions on m-commerce researchers' minds today. Research on mobile and tablets commerce is attracting the interest of e-commerce scholars ever since mobile and portable devices become a widespread and effective means of commercial transactions and

business practices. However, it also allows us to investigate what lies ahead in the future of m-commerce research as we move toward the more social-minded, hyperconnected world of tomorrow's social commerce (s-commerce) while entering the still unknown u-commerce era.

Kato, Kato, and Chida have investigated the timing of replies to mobile phone text messages focusing especially on the timing of replies from the perspective of the "recipient" of the message. In a previous study, they evaluated the timing of replies and the emotional strategies associated with such timing from the perspective of the "sender" and found they employed an emotional strategy whereby they "waited" before responding to mobile text messages in order to continue positive communication." In the present study, "Reply Timing as Emotional Strategy in Mobile Text Communications of Japanese Young People: Focusing on Perceptual Gaps between Senders and Recipients," the authors examined if the same strategy was as effective from the perspective of recipients of the messages. Specifically, study participants were asked by questionnaire to rate what emotions they would feel and to what degree when the other party waited before replying to the mobile text messages the participants had sent, where the message sent had conveyed one of four emotions: happiness, sadness, anger, or guilt. These four emotional scenarios are the same as used in a previous study, to allow for comparative analysis of the two studies. Additionally, participants in the present study were asked to provide freeform responses for scenarios where they felt it was desirable to wait before replying themselves. The results showed differences between the emotional strategic intent of senders for waiting before replying, as determined in the previous study, and how this was actually perceived by the recipients. The results suggest that there are gaps in perception between senders and recipients regarding the intentional manipulation of reply timing (especially waiting before replying). One suggested gap is that senders that intentionally manipulate the timing of replies for negative or hostile emotions such as sadness, anger, or guilt, actually run the risk of making the recipient feel the opposite of the sender's intended outcome.

In her chapter, "Texted Environmental Campaign in China: A Case Study of New Media Communication," Wang explains that mass media have been a central public arena for disseminating environmental issues and contesting claims, arguments, and opinions about our use and protection of the environment (Hansen, 2010). Media products, together with perceptions of the products by their audiences, make an impact upon political decision-makers regarding a wide scope of issues related to environmental protection issues. Over the past decade, there has been a clear transition in the environment communication domain: The scope for the concept of the environment has been expanded from natural phenomenon to an anthropocentric abstraction form representing the totality of nature (Walker, 2005). Communication scholars therefore need to examine the environmental issues from racial, socio-economic, political (Hansen, 2010), and cultural perspectives (Deluca, 1999; Gibbs, 1993). In other words, mass media need to approach environmental movements and organizations as a "collection of agencies making social problems claims" (Yearley, 1991, p. 52). Communication is the central means for the general public to understand the environmental issues, and mass media has been the major platform to shape the public opinion. Mass media also influence the pattern of their users' information-seeking behaviors. On the other hand, the drastically worsening natural environment in China has been routinely underrepresented or ignored in traditional media, due to its sensitive nature and potential threaten to "social stability." The environmental protection awareness among Chinese people is relatively low, and civic engagement in environmental policy-making is not encouraged by the government. Therefore, there is a need for readers to understand the strength and weakness of new media in environmental decision-making process in a special social and political context such as China.

This chapter aims to draw a dynamic map about how the environmental message was initiated and disseminated using Web-based communicational channels, and how the message tailor-made based on the natures of the Internet and cell phone mobilized the public participation in environmental protection events. To be specific, this study addresses mechanisms of mobile phone and the Internet as powerful communication channels to call for public attention on environmental issues and organize environmental protection events. The Web-based technology makes it possible for people with different social and economic backgrounds (especially marginalized grassroots) in China to communicate effectively while dealing with environmental problems and engaging in policy-making process. Besides the analysis based on mass communication frameworks, the Word Of Mouth (WOM) communication at interpersonal level is also investigated in this study. Drawing on the personal experience by witnesses and participants in Xiamen PX protest, this chapter addresses the roles of the Internet and mobile phone in China's environmental decision-making process by analyzing the delivery channels of the environmental decision, most circulated messages in the Internet and mobile phone during the street protest period, as well as documents related to the case. Data used in this chapter was retrieved from survey, in-depth interviews, and secondary data in December 2010. A triangulation of quantitative (regression analysis) and qualitative (content analysis) methods are employed to identify the key issues of China's environmental movement using Web-based technology and patterns of messages used in the new media sphere. The outcome of the regression analysis provides an opportunity for the author to have a primary look at the relationship among the variables included in the model, and identify the possible factors that have an impact upon people's willingness to participate environmental protection events. The statistical outputs show that a positive and strong association between age and people's willingness to join environmental protection movements, a negative and strong association between the reception of PX text message and the willingness of environmental participation, and a weak and positive relationship between the number of people whom respondents relayed text message to and the dependent variable. The examination of the most quoted environmental and protest messages from the Internet and mobile phone indicates that messages are carefully designed and disseminated through various channels (opinion leaders, platforms on the Internet, mobile phones, and WOM) to reach its target audience to the greatest extent. Given that all the literature made a distinguishable focus on persuasive effects of mobile phone text and online message, it is surprising to find that over than half of the respondents reported that they first learned about the PX project through friends, relatives, or other interpersonal channels. A graph mapping the dynamic flow of the environmental information in PX protest is also provided to illustrate how the information regarding the polluting PX project was initiated by the opinion leader(s), processed and delivered by the online media, and finally reached the general public. The information simultaneously reached the interest group and environmental group via online platforms from opinion leaders. But the two parties delivered messages through different communicational channels to its audience, the Internet and WOM used by the environmental group and mobile text message by interest group. Future research could be conducted on whether and how the Internet and mobile phone could facilitate cooperative activities in environmental campaigns across the globe, and how the pressure group's message could be tailor-made to address the trend of globalization in dealing with environmental issues and compete for mainstream media attention to the greatest extent. The study on how opinion leaders utilize new technology in environmental protection events could be furthered to their capability of influencing or shaping grassroots' opinion, and their perception of the effectiveness of the completed environmental campaign. The scarcity of scholarly work in media and environmental issues in oriental culture suggests a meta-analysis of literature over public opinion towards environmental issues across eastern countries, as well as the factors

contributing to the fickleness of the public opinion over time in one country or region could be worthy inquiry for future research. Last but not the least, it would be important for researchers to examine the magnitude of impacts by different medium forms (television, newspaper, Internet, mobile phone, etc.) in participatory events, and how to utilize multiple propagation tools to mobilize the population with different demographic backgrounds (children, seniors, etc.) to take part in the environmental protection campaign which benefits every single living being on this beautiful planet.

De Filippi analyzes in her chapter, “Ubiquitous Computing in the Cloud: User Empowerment vs. User Obsequy,” the evolution of the Internet, shifting from a decentralized architecture designed around the end-to-end principle with powerful mainframe/personal computers at each end, to a more centralized network designed according to the mainframe model, with increasingly weaker user’s devices that no longer have the ability to run a server nor to process any consistent amount of data or information. The advantages of ubiquitous computing (allowing data to become available from anywhere and at any time, regardless of the device) should thus be counterbalanced with the costs it entails (loss of users’ autonomy, concerns as regards privacy and freedom of expression, etc.).

The advent of Internet and digital technology has drastically changed the way people act and interact both at work and at home. People’s personal lives and professional lives are being increasingly intertwined. The office does not longer consist exclusively of a place for work, but is increasingly used by people dealing with personal matters, such as e-mails and social media. Conversely, professional activities extend throughout the day – either at home or at office during lunch break, while traveling, or in the evening after a long day of work, people do not hesitate to check their e-mails and, if necessary, to complete their work.

In most developed countries, the Internet has become a necessity. People need to be able to access the Internet at anytime and from anywhere. This obviously implies that they must be able to access all their personal or professional files without having direct access to their computer. Hence, mobile phones are turned into “smart phones” – intelligent devices able to provide all the necessary services to satisfy all the emerging needs of users in terms of connectivity. Thanks to the Internet, any device can potentially provide access to a world of information that was previously only available to a limited number of people connected to a given network. Over the past 20 years, users have become more and more demanding. They constantly expect new services and innovative applications that cannot be easily provided on the limited architecture of most mobile devices. Most of these applications are thus provided on remote servers accessible through the Net. As opposed to the traditional architecture of the Internet based on the end-to-end principle, with intelligent terminals that communicate with each other through the network, we are nowadays moving towards a system of increasingly less sophisticated terminals communicating through centralized online applications. The intelligence is progressively moving from the terminals to the core of the network: from personal computers, to laptops, tablets, smart-phones or any other device whose sole function is to access a particular online application. Nowadays, in order to communicate on the Internet, users increasingly rely more on technological platforms provided by third parties. The result is that, today, most of the means of production (in terms of hardware resources, software, content or data) are concentrated in the hands of large Internet services providers.

Hence, perhaps ironically, the ubiquity of the Internet is promoting a species of “user impotence.” With more reliance on centralized architecture, user devices become less powerful, less generative, and less capable of interacting with anything but the central server to which it is tethered. Similarly, the control over possible applications remains centralized. A wide choice of consumer applications does mask the reality that consumers increasingly take rather than generate.

This impotence relates to content as well. As resources move away from users to increasingly centralized architectures with large processing power and virtually unlimited storage capacity, users gradually lose control not only over the means of communication, but on the contents of their communications as well. With the advent of cloud computing, more and more hardware, software, and informational resources are exported into the “cloud” – where they are often controlled by large corporations mainly interested in the maximization of profits.

Despite the new opportunities provided by mobile applications, the growing centralization of these applications is likely to significantly impinge upon the freedom of users. Indeed, while ubiquitous computing definitely provides users with a greater degree of quality and comfort, the underlying architecture of these applications, however, plays an important role in shaping the way communications are regulated on the Internet. To the extent that technology determines how people can communicate with each other, users’ freedom may potentially be limited by the constraints imposed (either voluntarily or not) at the level of the user interface. Hence, the higher is the level of centralization, the smaller is the number of alternatives that users can choose from, and the stronger is the degree of control that Internet service providers can exert over the content of communications. Ubiquity breeds impotence.

After an initial period of euphoria on the part of the users, who enjoy the benefits of ubiquitous access to a growing number of online services, the dangers of ubiquitous computing and mobile applications are becoming more apparent. Users have become increasingly aware that more and more online applications are governed by centralized entities controlled by private companies and governments, and the most savvy of them are developing alternative platforms based on decentralized architectures. Such is the case of Eben Moglen’s “Freedom Box” – a small user’s device that uses free software and peer-to-peer technologies in order to allow users to communicate freely and independently on the Internet. Unlike smartphones, tablets, or other mobile devices specifically designed to control and monitor user activities and communications, the majority of these decentralized alternatives are intended to allow users to bypass censorship and control by re-appropriating the resources that had been previously exported onto the Cloud.

Most of these decentralized systems are generally difficult to use and are often not as comfortable as many cloud-based services. Yet, they nonetheless play an important role to the extent that they can be regarded as a “counter-power” against potential abuses by large cloud operators. While they do not have to be as big, nor as good, as most of the cloud services they compete with, their mere existence constitutes a safeguard for users who—were the cloud to become too “foggy” or nefarious—would preserve the ability to shift towards more decentralized alternatives, as a last resort. Certainly, there will always be a role for persons versed in the technology—the so-called hackers and geeks—to test limits, probe technologies, and otherwise serve as technological “watchdogs” in the cloud space. One might also envisage a number of collective responses posed by the twin challenges of ubiquity and impotence. Governments, public institutions (such as quangos, public research institutions, or universities), and community organizations might respond by providing their own cloud-based solutions, setting up their own clouds and providing services to certain communities, segments of the population, or indeed the population at large. Such responses would enable users to interact on the cloud, taking advantage of its ubiquity, without giving up their autonomy. As is the case for the user-driven responses identified above, these solutions need not be as comprehensive as the cloud solutions offered by the private sector; they merely have to be a viable alternative that stands in effect as an insurance policy against the concentration of cloud power in the hands of a few.

Fernandez and Marraud evocate in their chapter, “How to Design a Virtualized Platform? A Socio-Technical Study about the Current Practices of Teleworking,” the WITE 2.0 (Work IT Easy) project. It is a research and innovation program supported by public funds. It is a multi-partner project (academic and industrial actors). The aim of this project is to create a virtualized platform. This platform represents a unified work environment, based on virtualization, instant communication and interoperability of systems, and it allows the individuals to work anywhere (and possibly anytime). The platform is a software solution that centralizes the access to a set of functionalities, originally offered by several applications: it is the principle of unified communications. Unified Communications (UC) is the integration of real-time communication services such as instant messaging (chat), presence information, telephony (including IP telephony), video conferencing, data sharing (including Web connected electronic whiteboards aka IWBs or Interactive White Boards), call control, and speech recognition with non-real-time communication services such as unified messaging (integrated voicemail, e-mail, SMS, and fax). This platform is accessible from any connected terminal, either fixed or mobile (desktop, laptop, tablet, Smartphone, etc.). The WITE 2.0 platform will provide a wide range of communication tools that can be activated on demand in different situations, and depending on users’ needs (VoIP, discussion groups, instant messaging, email, etc.). The project has four main stages, divided into several subsections each. It is supported by a socio-technical analysis. Telecom ParisTech has assumed leadership in the scientific study of the needs and uses by administrating semi-structured interviews with individuals regularly working “remotely.” They wanted to better characterize these work situations: at home, on the premises of the employer but in geographically dispersed locations: in telecentres/co-working spaces/business center, with geo-distributed teams working. Mobility at work is spreading in the context of the mobility paradigm’s evolution. The project WITE 2.0 intends to address the urgent need for solutions in the field of remote collaborative work. These needs include ways to collaborate, communicate and socialize, but also to access these features regardless of the location, and from any workstation. It will provide a unified interface integrating all the features, and having a wide range of communication tools selectable on demand.

The project WITE2.0 is divided into four major phases. The first one concerns the study of employees’ needs and uses, for remote collaborative work. In order to capture the needs and uses, the researchers conducted two surveys: first, a qualitative study based on 47 semi-structured interviews, and second, an online quantitative survey with 553 individuals. The object of this phase is to highlight the kinds of remote collaboration in order to make recommendations related to the design of the platform. The results are published in the report “Work, Socialize, and Collaborate Remotely.” The main preliminary results of this report focus on how to socialize in a context of teleworking, the question of remote management, and of the technical skills needed for the use of ICT. The recommendations focus on the access to digital resources, the business information systems, and on issues related to security. The second phase of the project focuses on the technology. It is divided into two parts. The first part consists of the writing of functional and technical specifications of the platform WITE2.0. This document contains descriptions of service needs, and a comparison of various existing virtualization solutions. The authors notice that, since the launching of the project WITE 2.0, some other virtualization solutions have appeared on the market (Citrix, etc.). Through the comparison of different solutions, they highlight the distinguishing features and the technological services of the platform WITE 2.0. The second part of the phase 2 includes the implementation of all the technical elements necessary for the platform WITE2.0. These technical elements include the virtualization, the development of a socialization software solution, the services integration, the development of a unified software, and a beta testing of the platform. In the third phase,

the project partners have introduced new technological elements for the components and voice applications, the mobile profiles, and the SIP recorder.

The major technical element of this platform is based on the virtualization of Information Systems (IS). The workstation virtualization solution that the authors are interested in is also called the “PC on demand.” The virtual workstation displays a virtual image on the user workstation that is executed on a remote server (not virtualized). This technology has several advantages (centralizing logical components, checking the lifecycle of workstation, access to an individual virtual PC guaranteeing better mobility management of the employee). Virtual workstations will address a number of challenges compared to “ordinary” workstations (especially at the administrative, security, and deployment of machines levels). Virtual machines, for example, can decrease functional costs (maintenance, etc.), and technical problems such as obsolescence of the workstation. With VDI architecture, the ISD has no longer constraints related to maintenance and administration of its fleet of workstations. The user is no longer dependent on a single physical computer and can connect to his “own PC” from different physical devices, even from terminals like thin clients. Hence, virtualization is an already existing technology. The value of the WITE 2.0 platform is to combine this existing technology with a collaborative tool (unified communication). The aim is actually double: in one hand, to reduce (or eliminate) the problems due to data security, and on the other hand, to improve the level of collaboration between employees. In a context of managerial culture based on “face to face,” the new paradigm of mobile work does not seem to establish in French companies. Some forms of work organization are deeply rooted. Some managers and IT system directors still reluctant to introduce new developed technologies because of the security of the data circulation. The researchers’ bias is to say that the paradigm shift can take place now if they take into account the issues of teleworking in “sociological” and “technical” terms: hence, the importance of analyzing the practices of work organization and use of ICT, and also the experimentation of the virtual platform. In their analysis, the authors are interested in a key notion: the concept of “teleworking” that the authors have considered in its most classic form (the homework), but also in the most diverse realities that it could be today: either, all forms of “remote working,” i.e., forms of organization and/or performing work outside the classical unity of time and place. Indeed, many studies emphasize that the unity of time and place that characterized the traditional organization of work, would tend to disappear. Thus, the definition of teleworking that they have selected is based on: 1) The fixed place of work or alternating between several workplaces, provided they are removed from the hierarchy and/or colleagues; 2) The relationship to the employer and colleagues, remotely and by electronic links, thus justifying the name of teleworking. The first results that they will present in this chapter are based on a qualitative analysis approach. The authors have particularly studied the practices of coordination and cooperation in various configurations of remote work, more specifically in management practices supported by different communication technologies (fixed or mobile). They believe this kind of qualitative study is the most relevant because the authors make a statement about teleworkers’ practices. As the virtualized and unified platform technology is designing, they realized that they actually had little knowledge about the current technologies’ practices’ realities. The classic typology of the four kinds of teleworkers—homeworkers, mobile workers, telecenter worker, virtual team worker—should really be evolved. They have decided to question the realities of the teleworkers’ practices to understand the evolution of the work organization and to link the technology to specific uses (or link uses to specific technology). Hence, they have thought that the most equipped teleworker will be the most graduated (with the most responsibilities). They have discovered that the uses of mobile ICTs evolved in a very paradoxical way.

In his chapter, “Explaining Mobile Services Adoption between China and Developed Countries from a Cultural Perspective,” Gao shows that little research has been done to explore the adoption of mobile information services from a cultural perspective. This research is designed to study mobile information services adoption from a cultural perspective. Based on the two cultural dimensions (individualism/collectivism, uncertainty avoidance), two research hypotheses are presented. To examine these hypotheses, an exploratory study is carried out with a mobile information service called Mobile Tourist Service Recommender system (MTSR) with both respondents from developed countries and China. According to the results, one research hypothesis was supported, while the other research hypothesis (H1) was not supported in this exploratory study. The findings indicate that the cultural dimensions play important roles in how mobile information services are used and adopted in two different cultural settings: culture in developed countries and the Chinese culture. The results also highlight the relevance of the cultural dimensions (individualism/collectivism, uncertainty avoidance) as the factors affecting the adoption of mobile information services.

The rapid growth of mobile communication and usage of mobile devices in recent years has provided a great opportunity for creating a variety of mobile services. The advanced mobile devices enable users to try out new mobile services, but the adoption of many advanced mobile services has been slower than expected. On one hand, unlike some old technology-based products (e.g., landline phones), some users are not aware of some of the mobile services which mobile devices are able to offer. On the other hand, some users are afraid to use some mobile services because of the lack of technological knowledge. Therefore, it is necessary to consider non-technical factors, which might impact mobile services diffusion. As cultural characteristics have a fundamental effect on how users perceive mobile services, the appropriateness of a mobile service for one culture may not be appropriate for others. Little research has been done to explore the adoption of mobile information services from a cultural perspective. The objective of this chapter is to investigate how the different cultural dimensions influence users’ adoption of mobile services. In order to address this, the authors carry out an experiment to examine the adoption of some advanced mobile services with people from both China and developed countries from a cultural perspective.

Culture has been defined in a number of ways because of its multi-dimensional characteristics. Hofstede defined culture as mental programming (Hofstede, 1980), which refers to patterns of thinking, feeling, and potential acting, which were learned throughout people’s lifetimes. Hofstede’s study with a survey of IBM employees in 40 different countries found that the values of employees differed more based on their nationality, age, and education than their membership in organizations (Hofstede, 1980). From the study (Hofstede, 1980), four dimensions have been identified to distinguish among different cultures: uncertainty avoidance, power distance, individualism-collectivism, and masculinity-femininity. Hofstede and Bond (1988) subsequently added the fifth dimension: long-term versus short-term orientation. Schwartz and Sagiv (1995) identified two fundamental dimensions of cultural variables: openness to change (includes self-direction and stimulation value types) versus conservation (includes security, conformity, and traditional value types), and self-enhancement (includes hedonism, power, and achievement value types) versus self-transcendence (includes universalism and benevolence value types). Moreover, Bond’s Chinese Culture Connection (CCC) study revealed four factors derived from the Chinese culture: integration, Confucian work dynamism, human-heartedness, and moral discipline (Bond, 1988). The most commonly cited cultural dimensions are summarized in this chapter. An overview of the existing technology acceptance models and theories is also given in this chapter.

In addition, related work on the influence of cultural characteristics on mobile services adoption is searched. Harris, Rettie, and Kwan (2005) compared mobile commerce usage in the UK and Hong Kong. They found significant differences between the UK and Hong Kong in attitudes to mobile commerce services. They attributed these differences to the levels of collectivism and power distance in the cultures and to structural differences between the two markets. Marcus and Gould (2000) found that cultural elements are embedded in user interfaces as a set of contextual and social cues that enable effective use by applying the cultural dimensions proposed by Hofstede (1980) to Website design. Lee, Choi, Kim, and Hong (2007) constructed and verified a research model, based on interaction theory and the cultural lens model, that focuses on the relationship between users' cultural profiles and post-adoption beliefs in the context of the mobile Internet.

Based on the two cultural dimensions (individualism/collectivism, uncertainty avoidance), the following two research hypotheses are presented: H1) People from high individualism cultures will be more likely to adopt mobile information services than people from low individualism cultures; H2) People from high uncertainty avoidance cultures will be less likely to adopt mobile information services than people from low uncertainty avoidance cultures. To examine these hypotheses, an exploratory study is carried out with a mobile information service called Mobile Tourist Service Recommender system (MTSR) with both respondents from developed countries and China. China and the Developed countries represent two distinct cultures. The developed countries can be seen as a representation of western culture while China represents the epitome of eastern culture. The cultural values are meant to be different in the developed countries and China. These facts provide us with a good basis to analyze mobile information services adoption between these two distinct cultures. The MTSR system is a mobile service, which was developed at a Norwegian university. The MTSR system is intended to help tourists find Points Of Interest (POI) such as hotels and restaurants in order to let them schedule their time more efficiently and increase the probability that they will visit places that they will actually enjoy. By taking location, among other things, into the consideration, the system aims to provide better information to users. The validated instrument measure from previous research is used as the foundation to create survey items for this study. The authors recruited the experiment subjects by posting announcements to a number of student mailing lists. Students from several departments, studying for an undergraduate program or a graduate program, were invited to participate in the experiment of using the MTSR running on an Android mobile device. As a result, 46 testers participated in the experiment.

According to the results, one research hypothesis (H2) was supported, while the other research hypothesis (H1) was not supported in this exploratory study. The authors believe that some possible reasons exist for this finding. Firstly, the sample size of this pilot study was quite small. Most participants were experienced users of mobile devices and mobile services. They might expect to experience different kinds of new mobile services. In addition, overseas students from China might be influenced by western culture. As a result, it leads them to be the first one to try new services. Furthermore, some Chinese participants are well-educated in IT. They might be addicted to advanced mobile services. The findings indicate that the cultural dimensions play important roles in how mobile information services are used and adopted in two different cultural settings: culture in developed countries and the Chinese culture. On one hand, from an academic perspective, this study contributes to the literature on mobile services adoption and diffusion by examining the importance of the cultural dimensions to mobile information services adoption. On the other hand, from a business perspective, the results also provided some implications for practitioners. The results also highlight the relevance of the cultural dimensions (individualism/collectivism, uncertainty avoidance) as the factors affecting the adoption of mobile information services.

In their chapter, “Ubiquitous Game-Based Learning in Higher Education: A framework towards the Effective Integration of Game-Based Learning in Higher Education using Emerging Ubiquitous Technologies” Kasimati et al. show that the rise of mobile broadband devices and services has significantly changed the role of mobile devices in people’s daily lives by enabling the provision of innovative applications and services anywhere, anytime. Despite the fact that new ideas and innovation mainly occur within HEIs (Higher Education Institutions), the adoption of mobile and ubiquitous technologies by HEIs is still in early stages. This chapter attempts to provide a framework to support the latter towards implementing mobile and ubiquitous, game-based-learning activities. Aligned with the objective of this book, this chapter presents some examples and best practices of implementing this framework towards achieving the learning goals of future professionals in the fields of electronic and ubiquitous commerce.

This chapter presents a methodological framework towards the effective implementation of Game-Based Learning (GBL) in Higher Education Institutions using ubiquitous and mobile devices. The proliferation of digital games along with the effectiveness of game play on cognitive development has sparked a fascination with its integration in learning process and educational curriculums at an international level. A great number of research efforts and applications have been carried out, mainly focusing on the integration of GBL at early educational levels, specifically K-12 education. However, taking into consideration that the population of gamers is continuously increasing and was about 70 million people in 2011, 40% of which are aged between 20 and 34 years old, and the fact that all 21st century learners have grown up in a world where digital games have always been an important part of their lives (Johnson, Adams, & Cummins, 2012), it is a great opportunity and a need for Higher Education Institutions to focus on GBL towards achieving their goals with regards to their students’ collaboration, problem solving, critical thinking, creativity and digital literacy skills. Based on current literature, games, when carefully included in learning processes, have been proven to raise student’s motivation and engagement in a wide variety of activities that can support the development of many valuable skills (Kasimati & Zamani, 2012). Additionally, they are highly effective in interdisciplinary areas where students are required to combine knowledge from different fields and apply critical thinking and problem solving skills towards achieving their learning goals (Shabalina, Vorobkalov, Kataev, & Tarasenko, 2008). Game play, game design and production require research, collaboration, teamwork, creativity, problem solving and communication skills and critical thinking ability, all listed among the 21st century skills. Getting students through a well-supported game-based learning process (game play or game design and production) helps them improve their skills while simultaneously enhancing their knowledge; thus provides them with increased potential to succeed in the current innovation-driven economies at a global level. Equally important, the participation in such activities using innovative IT tools increases students digital literacy, their ability to effectively use and manage information technology, also considered as a skill for the 21st century citizens (Simões, Redondo & Vilas, 2012). As a result, the integration of GBL principles and digital games in tertiary education can significantly improve the quality of learning process and empower future professionals with improved high-order thinking skills.

Despite the fact that a great number of Higher Education Institutions include in their curriculums courses for game design and development, only few of them apply basic gaming principles in order to enhance their educational services. GBL practices and methodologies can provide Higher Education Institutions with new forms of learning content, interaction and collaboration, while providing potential for constant evaluation and provision of direct feedback (Derryberry, 2012). Equally important, the proliferation of mobile devices (smartphones and tablets) can further support Higher Education Institutions towards adopting GBL practices. Specifically, student’s (always increasing) use of ubiquitous

online applications, when investigated within a learning-centered context, provides Higher Education Institutions with a unique opportunity to easily engage students into game-based learning activities using their mobile devices as an educational tool. In conclusion, the adoption of game-based learning by Higher Education Institutions is just two to three years away (Johnson, Adams, & Cummins, 2012). However, in order for digital games to be effectively integrated in Higher Education, proper methodology and instructional design should be followed during the preparation, the delivery and the evaluation phase of GBL activities. To this end, this chapter aims to provide a robust literature review and combine GBL principles and methodologies into a framework for their proper integration in Higher Education Institutions and their alignment with technological specifications of mobile and ubiquitous technologies.

The chapter is organized in two parts where Part A investigates the basic principles towards the effective implementation of GBL (focusing on digital games) in HEIs; it further delineates the way mobile and ubiquitous technologies can support the smoothest integration of GBL in those specific organisations and its fastest adoption by relevant stakeholders (teaching staff, administrative staff, middle-level management employees, students). Part B presents implementation scenarios of the proposed mobile GBL framework in Higher Education. The provision of such implementation scenarios on specific relevant activities using mobile devices can guide academics and instructors realize the impact of these innovative educational practices thus leading to their fastest and smoothest adoption in HEIs' curricula.

The proliferation of mobile technologies and GBL practices provides a unique opportunity for the Higher Educational Institutions. Usual problems encountered by academics and which concern student's engagement and motivation can be effectively tackled with the proper integration of GBL in their curriculums. Additionally, 21st century learners and citizens are familiar with mobile devices and services, and are used to being always connected (any time, any place) even when they are on the move. This fact provides multiple opportunities for the provision of learning activities on mobile devices, thus providing a more learner-centered learning process. As a result, Higher Education Institutions are given the opportunity to combine two equally popular and effective learning practices (GBL and mobile) and properly integrate it into their curriculum in order to enhance student's motivation and engagement, and also achieve demanding learning goals. Last but not least, the adoption of such practices by Higher Education Institutions can provide them with a competitive advantage against other globally or nationally recognized ones due to the provision of innovative and high-quality learning services to their students.

The proposed chapter can enhance Higher Education Institutions ability to adopt and apply such practices, providing significant insight and guidance throughout all development phases (design, development, implementation, evaluation). Moreover, the provision of best practices and examples on the use of specific GBL activities using mobile devices will help academics and instructors into realizing the real impact of these innovative educational practices thus leading to their quickest and smoothest adoption in Higher Education Institution's curriculum.

Chaari's chapter, "The Role of Communication in Online Trust: The Communicative Action Theory Contribution," aims at better understanding the behavior of the Internet user. It suggests studying the role of communication on the trust of Internet users towards commercial Websites. In order to realize this research, the author has mobilized the Communicative Action Theory of Jürgen Habermas (1987). Therefore, she has brought a new perspective in understanding online trust following action theory. The literature on information systems, marketing and e-commerce highlights the critical role of trust in success of Business/Consumer relationships (Gefen et al. 2003; Chouk and Perrien, 2003, 2004, 2006; McKnight et al. 2002; Hoffman et al. 1999). According to several researchers, the lack of trust is the main reason of Internet users' reluctance towards online shopping. Kearney has concluded that 82% of online

shoppers abandon shopping from the early stages of their visits to the Websites (Hausman and Siekpe, 2009). Quelch and Klein argue that “trust is a critical factor in stimulating purchases over the Internet” (Corbitt et al. 2003, p.1). Online, the consumer cannot verify the quality of the offered products/services, and he cannot control the security of his personal and financial information. Thereby, he feels that his private life is totally dominated by Internet technology which exploits his vulnerability and protects the interest of the economic system (Salter, 2005). The opportunistic behavior of firms and the colonization of the consumer’s life world by the Website explain his rejection and his resistance to buying online.

Considering the prominent place of trust in Business/Consumer relationships, researches have focused on studying the determining factors of this phenomenon. One stream of search is characterized by a technological determinism highlighting the role of Websites’ technical characteristics as perceived by Internet users (Gefen et al, 2003). Another stream deals with individual variables related to the Internet user like psychological antecedents (Lundgren and Walczuch, 2004) and familiarity with an Internet vendor (Gefen, 2000; Bhattacharjee, 2002). Another research avenue was interested in the variables related to the merchant like organizational reputation (McKnight et al. 2002) and perceived size of the organization (Jarvenpaa et al. 2000). Some researchers were concerned with the pivotal role of communication in the development of online trust. Morgan and Hunt (1994) highlight that communication is a very important factor for trust development. These authors have defined communication as the formal and informal sharing of relevant, secure, and real time information between a consumer and a vendor. Chouk and Perrien (2004) have shown the role of third parties in influencing user’s attitude and trust development towards an E-merchant. However, most researchers were focused on technical and persuasive aspects of online communication and neglect to conceive it as an action that implies all participants (users and merchant) in a social interaction. According to Shih (2004), the purchase of an online product implies intense information communication, and an interactive behavior between firms and Internet users.

Following an instrumental rationality, the positivist approach of communication conceives the commercial Web site as a technology that supports the egocentric needs and the utilitarian interests of the parties (Firms and Internet users), protecting the capitalism ideology as the dominant class (Salter, 2005). It is a medium used by the firms to colonize the Internet users’ world and to directly change their attitudes and behaviors. Along those lines, most commercial Websites conceive of communication as one-way directed by the firm towards the Internet user where the technical features of the Website are used as a means to manipulate the Internet users’ behavior. Kozinets (2002), assumes that the market has for a long time dominated the consumer’s identity who is considered passive and devoid of expression. With the theory of communicative action of Jürgen Habermas (1987), there has been a major paradigm shift. The conviction that technology directly influences the users’ behavior gives place to a new conception according to which the Internet user is considered as an actor who can accept, refuse and even criticize the received message from the commercial Website. Indeed, the interactivity which characterizes commercial Websites support new forms of communication in two directions, exceeding the traditional and the determinist forms of communication between the firms and Internet users. Among these new communication forms, the authors mention e-mailing, discussion forums, and chat rooms which are open for all users and which make the Website a place of exchange of rational and ethical discussions as it is promoted by the democratic project of Jürgen Habermas (1987). For Habermas, communication is an action which depends on contextual, cultural and human factors, which cannot be reduced to deterministic mechanisms. He deals with two types of action which an actor might pursue following his interests that can be instrumental, strategic or emancipatory. The instrumental and strategic are purposive-rational actions which aim at achieving success and at developing a calculated trust based on calculation of the

advantages and the costs of the relation, whereas, the communicative action is coordinated by mutual understanding that allows the development of a relational trust based on social interactions. In communicative action, mutual understanding through language allows the social integration of actors and the coordination of their plans and their different interests. In this case, trust is based on common definition of the situation and the resolution of conflicts of interests between actors. Technology Internet is a medium of communication that can support the three kinds of action. The instrumental and strategic actions allow the development of calculated trust based on the control of the situation and the egocentric calculation of the outcomes of the exchange relationship. Whereas the communicative action, allows the development of relational trust based on social interaction and mutual comprehension. The instrumental and strategic conception of Website is very reductionist; it neglects the interactional aspect of communication which enables the development of relational or affective trust. Communication on the Website is also an interaction that helps build relationships among participants.

According to Habermas, the economic system is guided by an instrumental (technical) rationality. On the other hand, life world is a cultural resource guided by communicative action which enables common construction of sense and providing a communicative rationality. The lack of communicative activity is explained by the colonization of the life world by instrumental and strategic rationality (Habermas, 1987; Salter, 2005). The colonization aspects of Website, as a technology that support the interests of economic sphere, are at the origin of lack of online trust and their resistance from buying online. The emancipatory interests of consumer can only be achieved through open an equal discourse that guarantees the participation of all actors.

The objective of this chapter is to study the role of communicative activity in the development of consumer online trust. Trust based on social interaction, not on the calculus of utilitarian interests of the relation. Hence, the authors suggest studying the role of communication on the trust of Internet users towards commercial Websites from a new perspective to highlight the importance of discourse and mutual understanding in establishing collaboration and resolving conflicts, and then the development of mutual trust based on social interaction and the knowledge of the other. From this point of view, communication is not conceptualized as a linear process oriented toward a purpose, rather, it's an action oriented towards mutual understanding and coordination of action between participants. From this perspective, shopping online is no longer seen as a passive action, it becomes an autonomous action where consumers participate actively in the process of communication and establish a relation with the other. Commercial Web sites are useful not only for control but also for effective communication between actors in a democratic manner.

According to the chapter "Evaluation of South African Universities Web Portal Interfaces using a Triangulation of Ubiquitous Computing Evaluation Areas and Technology Acceptance Model" of Booi and Ditsa (2013), there are growing concerns over the user friendliness and other usability issues of South African Universities Web Portal Interfaces (UWPIs), which obviously will negate the user acceptance of the UWPIs. The main goal of this study is to develop a framework which could be used to evaluate and provide additional guidelines to improve the Usability and User Acceptance of South African UWPIs. The study applied a triangulation of Ubiquitous computing Evaluation Areas (UEAs) and Technology Acceptance Model (TAM) as theoretical foundations to derive the research model for this study. Multiple regression and stepwise regression analysis were used. The results suggest that Interaction and Invisibility of UWPIs are the most important measures that have a huge impact on user acceptance and usability respectively. The results of the study will provide guidelines for the design and development of South Africa UWPIs to meet their usability and user acceptance.

This study is about the usability and user acceptance of Web Portal Interfaces in South African universities. Usability and user acceptance problems of Computer System Websites and Interfaces attracted many researchers from different domains such as psychology, human factors, human computer interaction and management because of the occurrences of problems and the growing concerns associated with them. Human Computer Interaction (HCI) standards have three goals that must be met when designing interfaces (Battleson, 2000): (a) provide support to enable users to achieve their goals and to meet their needs; (b) provide the ease of use with minimal errors; and (c) provide a pleasant interface design. Even though Websites or Web Portal Interfaces may be highly usable and may be considered as such, there are no guarantees that they will be acceptable to the users (Davis, 1989). Battleson (2000) further argues that HCI research concentrate on usability as if it is a prerequisite of acceptance and overlooked some concepts of acceptability of new technologies. Two major methodologies for usability testing, which are laboratory studies (user participation) and field studies were identified in the work of Zhang and Adipat (2005). Interface design process involves user participation, and it has been considered as the best practice in the HCI domain, and it was used in this study. Introduction Computer System Websites and Interfaces can only add value to institutions or individuals if the systems are usable and acceptable. In his work Nielson (2001) defines usability as a quality characteristic that measures how easy the user interfaces are for the user to use. The Higher Education Sector in South Africa consists of 23 universities, which are categories as follows: 11 traditional universities; 6 comprehensive universities (merger between Traditional universities and Technikons); and 6 universities of technology (merger between Technikons). All these universities have one major goal, which is to provide quality information and knowledge to students, staff and the general public to sustain competitive advantage locally and globally. Web portals are provided as means of making sure that the universities achieve this goal. Research Problem Web portal interfaces suffer from a number of weaknesses such as technical difficulties, user unfriendliness and other usability issues. There are increasing alarms over the technical difficulties, user friendliness and other usability issues of South African UWPIs. Some of these issues raised the question whether these Web portal interfaces are evaluated for their usability and user acceptance. These usability issues will obviously have a negative impact on the user acceptance of the UWPIs. University Web portals and their interfaces being ubiquitous computing applications, the research problem that this study therefore sought to provide answers to is: what ubiquitous criteria should be used in evaluating South African Universities Web Portal Interfaces for their usability and user acceptance? Following from the purpose of the study and research problem, the main objective addressed in this study is to select and use appropriate usability and user acceptance criteria to evaluate South African UWPIs for their Usability and User Acceptance and to suggest an improvement on them.

The study applied a triangulation of the Ubiquitous computing Evaluation Areas (UEAs) framework and the Technology Acceptance Model (TAM) as theoretical foundations to derive the research model for this study. Based on the research model hypotheses were formulated and tested. Data Collections and Results A total number of 200 questionnaires were distributed and 180 returned. Of the total 180 returned, 118 questionnaires were suitable for analysis. The data collected was analysed using SPSS. In order to identify the variables that were relatively important in determining Usability leading to User Acceptance of UWPIs, Multiple Regression analysis was performed. In this study's analysis, a variable was not entered into regression model unless the p-value for that variable was less than or equal to 0.05. The same level was also set for removal of variables. A stepwise regression was used by allowing addition and removal of variables at various steps in progressively building the regression model. The results of the Pearsonel's Product-moment correlations indicated that the majority of correlations

were statistically significant. The highest correlation reported was between Invisibility of the UWPIs and usability of UWPIs (H_4 , $r = 0.720$). The research questions which were addressed using multiple regression analysis and the stepwise regression analysis showed that Appeal, Application Robustness and Invisibility constructs from the UEAs have no significant contribution towards User Acceptance. The results also suggest that invisibility and interaction of South African UWPIs have a great impact on user usability and acceptance respectively. The results of the study will provide guidelines for the development of South African UWPIs to meet usability and user acceptance. Based on the findings presented, the overall conclusion that can be drawn for this study is that: Interaction, Appeal, Application Robustness and Invisibility measures represent important variables that explain how the UWPIs are evaluated as well as the criteria which users use for evaluating UWPIs. Their importance from the most influential to the least influential is Invisibility, Interaction, Appeal and Application Robustness. The results of the study will provide guidelines for the development of South African UWPIs to meet their usability and user acceptance. Theoretically, the study is significant in providing a framework for research into UWPIs usability and user acceptance. Practically, the results of this study will provide guidelines for designers/developers, particularly in South Africa.

In his chapter, “Telepresence, Flow, and Behaviour in Virtual Retail Environment,” Ettis explains that mediated Communication Technology has undergone significant development over the past decades. They tend to utilise multiple media and richer graphical interfaces to excite and engage the user. Recently, new forms of communication and technology are emerging such as virtual reality display function, 3D graphics, video, interface avatars, online chat, and recommendation tools (Zhao & Dholakia, 2009). One key advantage of these Web 2.0 interactive technologies is that they provide users with a higher level of telepresence (or presence) within their virtual environment (Siriaraya & Ang, 2012). This heightened level of telepresence could potentially result in a more satisfying and immersive experience. This experience allows users to perceive an augmented sense of flow; a state of total concentration and enjoyment (Jahn, Drengner, & Furchheim, 2013; Koufaris, 2002; Novak, Hoffman & Yung, 2000; Wang, Baker, Wagner, & Wakfield, 2007). Practitioners and academics alike have recognised telepresence and flow as a key attribute of the user interaction experience with new media (Mollen & Wilson, 2010; Tikkanen, Hietanen, Henttonen, & Rokka, 2009; Wang, Yang, & Hsu, 2013), making these environments valuable as tools for use in purposes such as educational, entertainment, and e-commerce activity. Despite the growing importance of these new media and their adoption, the special characteristics of virtual worlds and their impact on user behaviour needs to be further explored (Domina, Lee, & McGillivray, 2012; Kober & Neuper, 2013; Rose, Clark, Samouel, & Hair, 2012; Tikkanen et al., 2009). The objective of this chapter is to review the flow theory, the telepresence concept and their interrelationship with the online behaviour. The study applies this framework to Web stores. Hence, this research empirically investigates the impact of telepresence and flow state experienced during online shopping, on e-commerce Websites visitor’s behaviour.

Understanding factors that influence use of a virtual world for shopping will help e-retailers create compelling virtual environments and develop better marketing strategies to enhance the consumer shopping experience in the virtual stores, while positively influencing purchase and return intentions. In this study, based on the flow theory, telepresence is considered to predict Websites visitor’s experience of flow as measured by concentration and enjoyment. Flow is assumed to influence e-consumer behaviour in terms of number of visited pages, actual visit time, and perceived visit time. Among eight hypotheses, this research finds support for four. It has showed that telepresence is an important determinant of flow. The concentration dimension of flow is crucial to enhance consumer’s number of visited pages and visit

time. Consequently, this research gives evidence that the flow theory and the telepresence concept are valuable in the context of online shopping. A self-administered online survey was conducted to test the hypothesised relationships. The data were collected from a fictitious consumer electronics online retailer. The Website was created for the purpose of this research. The retailer Website was carefully created by experts with a Web content and design similar to others e-commerce Website in the net. This was to prevent the e-store from being confounded by an unnatural or strange design that is not well suited to the consumer's expectations. The homepage include the most common interactive functions and graphical interfaces. The Website was uploaded to the Internet. In this method, the content was viewed in its actual form and in a realistic setting.

The findings of the study show that telepresence could enhance the flow state. The more the Website visitors are immersed and feel present in the mediated virtual environment, the more they will tend to be concentrated and enjoyed, and then experience flow. In the same way, findings from this study seem to empirically validate the relationship between the constructs of telepresence and concentration. The findings can affirm that in a computer-mediated environment, telepresence is an essential factor for enabling the person to remain concentrated on the computer-based task. The results of the study also confirmed some prior research on the theoretically elaborated relationship between flow and consumer behaviour. Interestingly, it is found that e-consumers in flow state might visit more pages and extend their Website visit duration. This effect is mainly produced by concentration. Based on these collective findings, it appears that telepresence plays an important role in influencing flow. Flow in turn influences e-consumer behaviour in the context of the Internet shopping. These results have a number of theoretical, methodological, and managerial implications. For more rigorous and practical implications, further research is needed to empirically investigate the role of telepresence in enhancing the other components of flow mentioned by Csikszentmihalyi (1997). Moreover, we know relatively little about the vividness and interactivity characteristics of Websites that encourage telepresence and flow. For instance, it would be appreciated to elucidate the role played by the collaborative Web 2.0 interactive technologies such as wiki, podcast, geographic mapping, and social sharing. Further research is needed, thus designers will be given clearer guidance as to what aspects they can alter to increase the chances of the user having an optimal experience. In addition, it would be valuable to monitor individual antecedents of telepresence and flow experience. In e-marketing, there have been studies on a variety of individual characteristics such as motivation, knowledge, need for cognition, shopping familiarity, and innovation. In addition, it is important to examine the role of socio-demographic characteristics (gender, age, education...), situational factors (product and Internet involvement, shopping goals...), and cultural settings. Such investigations will be valuable for our understanding of the universal phenomenon. Further recommendation for future research is that researchers extend the scope of the e-consumer behaviours to get a more profound understanding of telepresence and flow outcomes in e-shopping. It might be valuable to test the effects of cognitive and affective dependent variables such as satisfaction, impulse buying, recall, loyalty, and brand image change. Besides, it will be worthwhile to use clickstream data to assess the role played by telepresence and flow in user's decision to continue browsing the site or to exit and how long a user views each page during a site visit. Finally, future research could analyze several other interesting issues that remain unresolved. Future studies will be required to investigate telepresence and flow experience in other device such as smartphones, handheld computers, and PDA. It will be interesting to assess the extent to which a tiny screen may hinder telepresence and flow experiences. This chapter may stimulate more research in this field identified as still being under-explored. The research area is potentially fruitful. Many issues remain unresolved and many questions unanswered. The literature on telepresence and

flow is extensive, but there are many challenges that need to be resolved. These challenges are mostly methodological. Studies involving flow measurement assessment demonstrate that some potentially serious difficulties exist, and researchers need to think carefully about the direction of causality between flow constructs and the measurement approaches (Hoffman & Novak, 2009; Koufaris, 2002; Siekpe, 2005).

Chakrabarty evocates in her chapter, “‘From Clicks to Taps and Swipes’: Translating User Needs to a Mobile Knowledge Management Experience,” that knowledge management systems can be defined as systems that support creation, transfer and application of knowledge in organizations. A good knowledge management system helps to maintain the tacit and explicit knowledge of its users and the success of an organizational knowledge management system depends on how effectively it can be used by its user base at the time of need. To make a knowledge management system effective, it has to be easy to access, and provide accurate information in a timely manner. Organizations constantly strive to make their knowledge management systems more effective by improving the richness of the systems and increasing the reach of the knowledge resources to help employees in their job functions. Some of the techniques recommended by experts to improve access to knowledge resources include providing a search feature so that employees can access information from large knowledge resources. Inclusion of search is the most recommended and advocated technique in most organizations though there are not many studies to confirm it. Other ways to improve access and usability of organizational knowledge sources include improving the user interface of the systems and creating a directed navigation where the system is designed to mimic the transactions that users are expected to perform. Even as knowledge management systems are becoming more efficient and robust, the organizational landscapes are also evolving. One noticeable change that impacts the design and development of knowledge management systems is that more and more organizations now have a mobile employee base. The inclusion of mobile employees has created the need to provide access to organizational information anytime and anywhere. As a result, organizations are seeking a solution that serves the need of a mobility agnostic solution for a knowledge management system. Current techniques of usability and user feedback techniques to gather requirements have shown that overwhelmingly, the users perceive the inclusion of a “Google” search engine implemented at an organizational level to be the best solution. However, in technical terms, the limitation or drawback of just mobilizing the existing knowledge resources is not necessarily the result of an underperforming search engine. An Internet search engine like Google works better in chaotic data because chaotic data accounts for ambiguity of search terms, different vocabularies, and user description of the problem used by the users. An organizational knowledge management system on the other hand is very structured and consistent when it comes to using terms and definitions. When employees look for information based on user queries, their language may not always reflect the language used by the subject matter experts of the organization. As a result, the performance of the search engines like Google is not always the optimal solution.

With the mobilization of organizations, the employees and the workplace, there is a need to mobilize the learning and reference content for the employees. This helps the employees to keep up with the organizations’ needs and helps them to complete their job responsibilities more effectively. The challenge for the knowledge managers is to enable mobile organizational knowledge resources to its employees at any time or at any place. Currently, many organizations were willing to invest in new technologies and infrastructure to support the growing needs of the business and its employees. The need to mobilize the systems have come as a boon to the knowledge managers who see this new requirement as a chance to revamp the existing knowledge management systems from scratch rather than go for a iterative update

or facelift on an existing system. Understanding the specific needs of a new knowledge management system can be derived from investigations that go beyond user feedback. This chapter provides the insight into some of the challenges in organizational knowledge management systems and the implications of designing a mobile system. When user feedback techniques like focus groups and surveys do not yield any actionable items for the knowledge managers to formalize their requirements for a new system, it becomes necessary to find alternate mechanisms to understand user behavior in the existing systems and how the behavior would be impacted when the system is mobilized. In other words, the challenge is to understand what the users need and not what the users want. For mobile systems, it also translates into understanding what resources need to be included in the system and how it can be accessed in the system. This chapter presents one approach to answer the “what” and the “how.” The “what” is answered using a combination of available log files and interactive sessions like card-sorting. The “how” is answered by understanding the system characteristics that can or cannot be used on the mobile device. System log files, page view information, and navigation information like start point and end point helps to understand the user’s choice of path in the existing systems. This is called content footprint.

Understanding when the users choose one type of content over the other and how users navigate through the content helps to identify the different content types, the relative importance and usage frequency. Search logs from the knowledge management systems can help understand the specific pieces of information that users look for in the organization. It can also provide an insight into the vocabulary of the employees and the customers being served by the employees. Since the employees search the knowledge base in response to a customer’s query, most often they repeat the same words or phrase in the search engine. Analyzing and normalizing the search logs help to identify and remove language ambiguity and wording inconsistencies. The navigation elements of the system including the taxonomy and metadata can be designed based on the results of card-sorting exercise where system users can categorize and rank different chunks of information based on how they are used. Card sorting exercise can be repeated with different user groups with various job responsibilities to understand how content was perceived and used differently by different user groups. Once the navigation elements are decided, the next step is to answer how to place these navigational elements on the mobile interface. The navigation of the system can be designed as a function of the surface area of the mobile device to facilitate the use of muscle memory of the user. Specific areas on the surface can be assigned to different content types to facilitate the use of the users muscle memory. The choice of location and content type needs to be predefined and fixed. A layout configuration that supports the user’s cognitive load and helps them navigate the system with the same ease as a television remote control or a car’s dashboard needs to be decided. A few configurations are presented in the chapter to help users select the most suitable layout. Changing the location of the navigation elements without proper thought can lead to poor user experience.”

Finally, Haikel-Elsabeh in the chapter, “Understanding Brand Implication and Engagement on Facebook,” shows that marketers are increasingly interested by social network and virtual community analysis. Firms want to understand their Facebook, Twitter, Pinterest fans in order to create and develop new relations with them. Yet, researchers want to understand why individuals post online by studying the context of professional virtual communities for instance (Wasko and Faraj, 2005). Also, why do they adopt certain types of behaviors online as in travel related Websites for example (Yoo & Gretzel, 2008)? The authors are also interested by their relations to virtual communities (Dholakia et al., 2004). Indeed, researchers have employed various theories regarding social network analysis, motivational theory (Bagozzi & Dholakia, 2002), and brand engagement (Sprott, Czellar & Spangenberg, 2009). They

chose the social network Facebook because brands are increasingly developing their strategy to target their fans on their brand pages. Yet brands want to understand why their consumers are increasingly interested by their pages on social networks like Facebook. Thus they want to comprehend their users' behavior in order to develop their brand equity and marketing strategies.

What are the drivers for Brand engagement and implication on Facebook? In order to explore the impact of motivations on content and information sharing on Facebook brand pages, this study proposes an analysis focused on a reduced number of motivations and a proposal of a statistical model attempting to link the frequency of posting and liking on Facebook in general, and Brand engagement to motivations. The aim of the study is to assess the impact of motivations on brand engagement and frequency of posting and liking on Facebook. The authors used the concept of brand engagement measure a deep interest toward brands on Facebook. The concept of frequency of posting and liking was focused on the tendency to post or like frequently each time the user connects to Facebook. The motivations they introduced were based on the literature for sharing on social networks. Overall, the objective is to open the path to new studies using the authors' scale on specific brand pages on Facebook and to the cross comparisons between those different brands. In order to understand the drivers behind brand implication it is important to go beyond the existing scales on Facebook. Facebook is a real opportunity for marketers. There are 18 million users in France and 10 million spend 55 minutes per day on the platform. The aim of the study conducted by a communication Web agency called DDB is to understand why brand fans in France like their favorite brands on Facebook. The majority of users that answered the survey were women (55%) the average age was 31 years old. The fans that are heavy likers are called "Hard core users" they connect to Facebook several times a day. They use the platform to have fun (49%), talk to their families and friends (32%), and to search for new information (16%). Why Facebook users become brand fans? For 75% of users they liked a brand because they received an invitation or email. They also liked a brand because of the Word of Mouth of their friends on Facebook (59%). The other reason why they liked a brand is because they conducted an active search on Facebook to find a specific brand or product (49%). Fans have specific expectations toward their favorite brands: they want to gain the attention of their favorite brands when they become fans (53%). When they are attached to the brand, they become ambassadors (48%) and recommend the brand to their friends. Fans want the brands to have on their pages: promotions (41%), news regarding the brand (35%). Yet, not all fans are ready to comment or like: only 50% of the fans are ready to contribute on the brand page. Nonetheless, 76% have already liked a brand post on a brand page. Being a fan impacts the intentions of buying the brands' products and services (36%). Brand fans are also 92% to recommend the brand to their friends. The hard users give a very high grade (between 8 and 10) to their favorite brands on Facebook. Nonetheless, brand fans can be quick to unlike a brand on Facebook, specifically when the brand posts too much information (82%). This phenomenon should be carefully studied and taken into account by both researchers and marketers alike. What are Brand pages users on Facebook interested by? According to the study, Facebook users tend to be interested by media (55%), important causes (51%), and fashion and luxury brands (46%).

The DDB study was focused on a reduced number of users. Yet when we go on Social bakers Website we can clearly see the favorite brands worldwide on Facebook with regards to the total number of likes. If we look at the top ten, 7 out of 10 brands provide food and/or beverages to the masses: Coca cola, Red Bull, Starbucks, Oreo, McDonald's, Wal Mart. Thus food related brand appear to dominated worldwide on Facebook. Thus it is essential to study the literature on Brand communities to comprehend more deeply why users engage in brand engagement behavior and why do users contribute to brand communities on Facebook. Brand communities are defined by Muniz and O'Guinn (2001) as a "specialized,

non-geographically bound community, based on a structured set of social relations among admirers of a brand.” The members of brand community share in common their interest for a brand but also consume the brand’s products or services. These individuals share knowledge about the brand’s news, share information about their interest for the brand. According to McAlexander et al. (2002) brand communities enable the “creation and negotiation of meaning.” The social structure and the exchange of information foster brand engagement and loyalty Muniz and O’Guinn (2001). Indeed, according to Dholakia et al. (2004) there are individual as well as group motivations for participating in brand communities in social networks. The individual drivers are that social network users that engage in virtual communities seek to share and learn information and to engage in social relations in the community.

The aim of this chapter is to propose a new scale of motivations for online posting on brand Facebook pages. Its objective is to assess whether the motivations for posting and liking on a brand page on Facebook have an impact on brand interest behavior (brand engagement) with regards to the general frequency of posting on Facebook. Three axis were explored to comprehend the drivers for brand engagement on Facebook. First, the authors studied the literature on the eWOM on Facebook to comprehend why users recommend and like to share information about brands with others. Second the motivations for brand engagement behavior are studied: what are users motivations to contribute to brand communities. Third, the authors analyzed the literature on brand implication in order to explain the phenomenon of brand interest on Facebook.

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ENDNOTES

1. Arena is a brand of competitive swimwear, one of the most famous brands of swim glasses.
2. World of Warcraft (WoW) is a massively multiplayer online role-playing game (MMORPG) by Blizzard Entertainment.
3. Second Life is an online virtual world developed by Linden Lab. It was launched on June 23, 2003.
4. Felix Baumgartner, 42-year-old, jumped out of a space capsule from an altitude of approximately 71,580 feet as the Red Bull Stratos Project, 15th of March 2013.