# Chapter 11 Do Privacy Concerns Affect Information Seeking via Smartphones?

**Mohamed Abdelhamid** University at Buffalo, USA Joana Gaia University at Buffalo, USA

**Srikanth Venkatesan** University at Buffalo, USA **Raj Sharman** University at Buffalo, USA

## ABSTRACT

The innovation and evolution of technologies in smartphone industry has enabled users to efficiently achieve many tasks including utilizing search engines for instant information retrieval anytime and anywhere. Nonetheless, some users choose not to use these smartphone features including search engines to seek information. This study explores the factors that impact the likelihood of information seeking via smartphones. Privacy concern was found to be one of the main factors influencing the likelihood of seeking information. Android users were more likely to seek information compared to iPhone users, possibly due to the differences in the features of the operating systems of these phones. Motivation to seek information captured by technology ownership increases the likelihood of information seeking. The diversity of social network connections also plays a significant in information seeking behavior of the users.

DOI: 10.4018/978-1-5225-2604-9.ch011

Copyright © 2018, IGI Global. Copying or distributing in print or electronic forms without written permission of IGI Global is prohibited.

## INTRODUCTION

The past decade has witnessed a meteoric rise in the innovation of smartphones. The two main players in smartphones operating systems are IOS and Android, the latter being used in several hardware sets while IOS is only used in Apple products. Recent innovations have resulted in remarkable changes in industries and fields outside the cell phone industry. Among these changes, search engines have taken on a new challenge since smartphone users may want to acquire and seek information using their smartphones rather than a desktop computer or a laptops. The traditional way of using public desktops or personal computers may not be practical nowadays as people are on the go all the time. Given these circumstances, search engine players such as Google, Bing, and Yahoo have made functional changes to make this experience (seeking information using smartphones) more practical and efficient. Search engines are now smartphone compatible and have been integrated into smartphone web browser. Smartphone applications for search engines can be downloaded which makes search functionality available quicker than ever.

As of 2014, 34% of cell internet users don't use their laptops or desktops to go online but mostly use their cell phones. About 30% of cell owners think they cannot live without their phones (Pew Research Center, 2014). Indeed smartphones have become a primary tool in people's everyday personal, academic, and professional lives. However, some owners of smartphones don't use their device to seek information. This brings up a very important question: in the era of smartphone technology innovation, what would deter users from using some of the functionalities that make these innovations smart? Why do some people seek information through smartphones while others do not? What factors contribute to more information seeking through smartphone search engines?

## THEORY AND MODEL DEVELOPMENT

This study investigates the factors that impact users to utilize the search engines in their smartphone to seek information. The model has been theoretically developed based on the information foraging theory (IFT) (Pirolli & Card, 1999). The behavioral patterns described in IFT were derived from Optimal Foraging Theory (OFT) (Stephens & Krebs, 1986) and the Adaptive Control of Thought-Rational Theory (ACT-R) (Anderson et al., 2004). We adapt the theory to investigate users' information seeking behavior using the search engines of their smartphones. The theory explores users' online search behavior and the factors that impact their decisions to seek or search

12 more pages are available in the full version of this document, which may be purchased using the "Add to Cart" button on the publisher's webpage: <u>www.igi-</u> <u>global.com/chapter/do-privacy-concerns-affect-information-</u> <u>seeking-via-smartphones/183244</u>

## **Related Content**

Information Hiding Using Interpolation for Audio and Speech Signals Mamoru Iwaki (2013). *Multimedia Information Hiding Technologies and Methodologies for Controlling Data (pp. 71-89).* www.irma-international.org/chapter/information-hiding-using-interpolation-audio/70284

#### Multimedia Security and Digital Rights Management Technology

Eduardo Fernandez-Medina, Sabrina De Capitani di Vimercati, Ernesto Damiani, Mario Piattiniand Pierangela Samarati (2004). *Information Security Policies and Actions in Modern Integrated Systems (pp. 230-272).* www.irma-international.org/chapter/multimedia-security-digital-rights-management/23374

#### Wavelet and Curvelet Transforms for Biomedical Image Processing

Manas Saha, Mrinal Kanti Naskarand B. N. Chatterji (2018). *Handbook of Research on Information Security in Biomedical Signal Processing (pp. 95-129).* www.irma-international.org/chapter/wavelet-and-curvelet-transforms-for-biomedical-image-processing/203382

## A Reliable Data Provenance and Privacy Preservation Architecture for Business-Driven Cyber-Physical Systems Using Blockchain

Xueping Liang, Sachin Shetty, Deepak K. Tosh, Juan Zhao, Danyi Liand Jihong Liu (2018). *International Journal of Information Security and Privacy (pp. 68-81).* www.irma-international.org/article/a-reliable-data-provenance-and-privacy-preservationarchitecture-for-business-driven-cyber-physical-systems-using-blockchain/216850

## Efficient Authentication Scheme with Reduced Response Time and Communication Overhead in WMN

Geetanjali Ratheeand Hemraj Saini (2018). *International Journal of Information Security and Privacy (pp. 26-37).* 

www.irma-international.org/article/efficient-authentication-scheme-with-reduced-response-timeand-communication-overhead-in-wmn/201508