Analyzing Human Behavior in Cyberspace

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IGI Global
DISSEMINATOR KNOWLEDGE

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Section 1
User-Focused Cyber Behavior

Chapter 1
    Luka Lucić, Pratt Institute, USA
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The potential benefits of the Internet in providing stand-in educational experiences to displaced young people cannot be overstated. However, actualizing these educational potentials requires much future work in research and practice. By describing the initial theoretical and practical considerations for how these potential benefits can be translated into real-life benefits for refugee children, this chapter serves as an initial step in that direction.

Chapter 2
    John Chapin, Pennsylvania State University, USA

The purpose of this chapter is to document the extent of Facebook use and cyberbullying among adolescents. It is based on a study theoretically grounded in third-person perception (TPP), the belief that media messages affect other people more than oneself. As Facebook establishes itself as the dominant social network, users expose themselves to a level of bullying not possible in the analog world. The study found that 84% of adolescents (middle school through college undergraduates) use Facebook, and that most users log on daily. While 30% of the sample reported being cyberbullied, only 12.5% quit using the site and only 18% told a parent or school

official. Despite heavy use and exposure, adolescents exhibit TPP, believing others are more likely to be negatively affected by Facebook use. A range of self-protective behaviors from precautionary (deleting or blocking abusive users) to reactionary (quitting Facebook) were related to decreased degrees of TPP. Implications for prevention education are discussed.

Chapter 3

Satoko Ezoe, Shimane University, Japan
Masahiro Toda, Notre Dame Seishin University, Japan

Smartphone use has rapidly developed in recent years and become an established part of daily life in many countries. As various applications have been developed as communication tools for use with smartphones, allowing the internet to become more accessible, patterns of dependence have been routinely reported particularly among adolescents. In this chapter, the authors reviewed the previous studies about the relationships of smartphone dependence to chronotype and gender among adolescents. Chronotype refers to preference for sleep-wake timing: for example, morning types go to bed, get up, and experience peak alertness and performance earlier in the day than do evening types. It was found that the light emitted from media screen in the evening before bedtime may delay the circadian rhythm. In addition, excessive smartphone use may lead to sleep disturbances. Recent studies suggested that evening types and females may be more prone to become smartphone dependent.

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Section 2
Technology-Focused Cyber Behavior

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Chapter 4

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In this chapter, a kind of emotion recognition method based on gait using a customized smart bracelet with a built-in acceleration sensor was introduced in detail. The results showed that the classification accuracies of angry-neutral, happy-neutral, angry-happy, and angry-happy-neutral using the acceleration data of wrist are 91.3%, 88.5%, 88.5%, and 81.2%, respectively. Besides, the wearable devices and motion-sensing technology application in psychology research have been further discussed, and non-contact emotion identification and mental health monitoring based on offline behaviors were reviewed summarily.

Chapter 5

Nan Zhao, University of Chinese Academy of Sciences, China
Tingshao Zhu, University of Chinese Academy of Sciences, China

As today's online social network (OSN) has become a part of our daily life, the huge amount of OSN behavior data could be a new data source to detect and understand individual differences, especially on mental aspects. Based on the findings revealing the relationships between personality and online behavior records, the authors tried to extract relevant features from both OSN usage behaviors and OSN textual posts, and trained models by machine learning methods to predict the OSN user's personality. The results showed fairly good predictive accuracy in Chinese OSN. The authors also reviewed the same kind of studies in more pervasive OSNs, focusing on what behavior data are used in predicting psychological profiles and how to use them effectively. It is foreseeable that more types of OSN data could be utilized in recognizing more psychological indices, and the predictive accuracy would be further improved. Meanwhile, the model-predicted psychological profiles are becoming an option of measurements in psychological studies, when the classical methods are not applicable.

Chapter 6

Ayse Kok Arslan, Oxford Alumni Silicon Valley Network, USA

Based on the results of the evaluation of an embedded engineering learning on social cloud model, the author suggests whether an "Imagineering" approach to learning is and complies with design principles leading to creative products. It can also provide an evidence for whether the SC supports co-learning environments which contributes to the efficiency of the process. Not only training institutions, but also knowledge enterprises should have a ready infrastructure for network systems to access the cloud technology. This chapter discusses the options of a design model on social cloud.

Chapter 7

Yujia Peng, University of California – Los Angeles, USA

As a new way of implementing human-computer interface, brain-computer interfaces (BCI) dramatically changed the user experiences and have broad applications in cyber behavior research. This chapter aims to provide an overall picture of the BCI science and its role in cyberpsychology. The chapter starts with an introduction of the concept, components, and the history and development of BCI. It is then

followed by an overview of neuroimaging technologies and signals commonly used in BCI. Then, different applications of BCI on both the clinical population and the general population are summarized in connection with cyberpsychology. Specifically, applications include communication, rehabilitation, entertainments, learning, marketing, and authentication. The chapter concludes with the future directions of BCI.

Section 3
Activity-Focused Cyber Behavior

The internet holds considerable potential to improve the world's health. Noncommunicable, or so-called lifestyle, diseases are responsible for more than three-fifths of all deaths worldwide. With over half of the world's population now online, public health officials and entrepreneurs have developed a growing array of digitally mediated interventions to encourage healthy lifestyle choices. In this chapter, the authors discuss online and digitally mediated interventions, provide examples of their use, and summarize recommendations for future research and development. Particular attention is paid to online education, social media support groups, adaptive and gamified interventions, and emerging technologies such as ambient and wearable sensors and artificial intelligence.

The emergence and rapid escalation of e-retailing has triggered many changes in daily life of the shoppers as well as the marketers. E-retailing is playing a major role in the Indian economy and is expected to change the current scenario of shopping from physical stores to e-stores. Similarly, changes in consumers' attitudes along with the availability of cheaper and reliable technology have led to a significant growth in online sales around the world. The chapter aims to examine the shoppers' attitudes towards e-shopping and also to find the critical reasons for not shopping through online. The results reveal that the shoppers are still hesitating to purchase online. The most important reasons for not shopping online are preferring to buy by

touching and feeling, online security and privacy, and customer service quality. The factors influencing to buy online are being able to get detailed product information, product delivery, convenience, product quality, and competitive prices. These results also have some practical implications for managers and strategists of e-stores.

Children and adolescents are actively engaged in a digital world in which blogs, social networking sites, watching videos, and instant messaging are a typical part of their daily lives. Their immersion in the digital world has occurred for as long as they remember, with many not knowing a world without our modern technological advances. Although the digital age has brought us many conveniences in our daily lives, there is a darker side to children's and adolescents' involvement with these technologies, such as cyberbullying. This chapter draws on research from around the world, utilizing a variety of research designs, to describe the nature, extent, causes, and consequences associated with children's and adolescents' involvement in cyberbullying. Concluding the chapter is a solutions and recommendations section in which it is argued that cyberbullying is a global concern, affecting all aspects of society, requiring a whole-community approach.

The major purpose of this chapter is to understand average user's decision-making process in cybersecurity by reviewing and integrating several major theoretical frameworks discussed and applied in decision making processes in cybersecurity. The average users are the ones who do not realize or understand when or how to perform security-critical decisions, the ones who are unmotivated to comply with company and school cybersecurity policies and procedures due to inconvenience, and the ones who do not have sufficient knowledge in cybersecurity to make sound security decisions. It is important to discuss and understand the role of such users and their behaviors based on systematic analysis so that we can identify potential factors causing "poor" security decisions and find ways to reduce the likelihood of being victims of cyber-attacks. The ultimate goal is to provide insights and make recommendations on how to foster individual's cyber acumen and cultivate a more effective decision-making process.

The impact of both intentional and unintentional exposure to internet pornography on adolescents has been debated in the literature for decades. However, the differences in the operational definitions of pornography and exposure, not to mention the differences in methodology and sampling, make it difficult to synthesize findings and identify patterns across studies. In addition, the majority of the research has employed a rather broad measure of "exposure to general pornography" by adolescents in order to understand the impact of early exposure to pornography; however, internet pornography includes a wide range of sexually explicit materials, not just adult pornography. Thus, the goal of this chapter is to explore the relationship between nondeviant pornography use and deviant pornography use (e.g., child pornography) by discussing the Seigfried-Spellar study which examined the role of individual differences and age of onset in deviant pornography use.

This chapter started by introducing a recent research study that disclosed adolescent victim experiences across seven major types of cyberbullying, significant gender and age differences, and reasons for not reporting incidents of cyberbullying to adults. The chapter then related the research findings to major areas in the literature on the nature and forms of cyberbullying in contrast to traditional forms of bullying, its prevalence among school-aged youths, the effects of gender and age on adolescent victim experiences of cyberbullying, and the factors that contribute to adolescent attitude toward reporting cyberbullying incidents to adults. The chapter suggested that future research should further explore issues such as how various types of cyberbullying affect adolescent mental wellbeing, how age and gender affect school-aged youth victim experiences of various forms of cyberbullying, and how professionals and other adults may help adolescents counter cyberbullying.

Chapter 14

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This chapter review some of the principal personal and situational factors established
through recent international research that contribute to explain the phenomenon of
cyber-victimization and cyber-aggression among adolescents, as well as its relations
with socio-demographic variables (age, sex, grade level). Personal factors, like
emotions, motives, normative beliefs, and moral disengagement were discussed
jointly with situational factors, as the role of peers, friends, school and family
environments, in addition to the possible interactions of these variables on cyber-
bullying. The chapter ends with a discussion of future directions about the research on
this phenomenon, namely in what concern educational programs that can use digital
technology to help adolescents, schools and families to deal with cyber-bullying.