

Chapter 1

Are Wearables Good or Bad for Society?

An Exploration of Societal Benefits, Risks, and Consequences of Augmented Reality Smart Glasses

Daniel W. E. Hein
University of Bamberg, Germany

Philipp A. Rauschnabel
University of Michigan – Dearborn, USA

Jennah L. Jodoin
University of Michigan – Dearborn, USA

Björn S. Ivens
University of Bamberg, Germany

ABSTRACT

Recent market research forecasts predict that a new form of wearable devices will soon influence the media landscape: Augmented Reality Smart Glasses. While prior research highlights numerous potentials in personal and professional settings of smart glasses, this technology has also triggered several controversies in public discussions, for example, the risk of violating privacy and copyright laws. Yet, little research addresses the questions of whether smart glasses are good or bad for societies, and if yes, why. This study conducts exploratory research to contribute to narrowing this gap. Based on a survey among consumers, the authors identify several societal benefits and risks that determine consumers' evaluation of the anticipated and desired success of smart glasses. These findings lead to numerous important implications for consumers, scholars, managers, and policy makers.

INTRODUCTION

A recent study by Goldman Sachs (2016) asserts that augmented reality (AR) smart glasses are the latest step in an evolution of digitization of reality and a large developing future market. What began with stationary computers that were temporarily online to receive and display information to their mostly business users in the last century turned into a network dominated by user-generated content (UGC), with

DOI: 10.4018/978-1-5225-2110-5.ch001

users being mainly consumers that are permanently online and access the internet through a multitude of devices (Hennig-Thurau et al., 2010). Smart glasses mark the current latest step in this evolution as they hold the potential to merge online and offline – not just through ubiquitous and permanent online accessibility, but rather by merging online senses directly with consumers' vision (Rauschnabel, Brem, & Ro, 2015). This results in entirely new ways for consumers to interact with the Internet and its content.

Smart glasses represent a radically new invention with an important number of potential use cases for both civil and business life (Berque & Newman, 2015; Hein & Rauschnabel, 2016; Moshtaghi et al., 2015). However, because they are so new and their uses so unexplored, part of their success will depend on the hopes and fears consumers hold with regard to their usage and their proliferation (Lee, Bojanova, & Suder, 2015). Consumers do not just care about their mere self-interest, but rather include interests of the environment and society in the decision making (Doane, 2001). This trend of ethical consumerism can be defined as “spending that makes a positive difference in the world” (Witkowski & Reddy, 2010). It may become problematic with regard to smart glasses. When trying to predict smart glasses adoption, the technology acceptance literature would typically be of high relevance. However, early research suggests that smart glasses possess the potential to radically change society and the rules and norms it operates on for better and for worse (Wassom & Bishop, 2015). Anecdotal evidence for this derives from various newspaper articles, press commentaries and articles that discuss (predominantly negative) consequences of this technology for societies. However, the academic literature does not provide findings on what these potential consequences are and how these factors influence consumers' evaluations from a societal perspective. Absent such knowledge, managers may find it difficult to promote the use of smart glasses while policy makers may have difficulties in developing appropriate legislation. Finally, for theory, the lack of pre-market knowledge on societal consequences might hinder the understanding of the diffusion of smart glasses, as prior research has shown that consumers tend to include various ethical (Jacobsen & Dulrud, 2007) and social (Venkatesh, Thong, & Xu, 2012; Davis, Bagozzi, & Warshaw, 1989) variables in their decision making.

In this chapter, we aim at increasing the understanding of societal factors associated with smart glasses. We are particularly interested in providing answers to the following research questions (RQs):

RQ1: How do consumers evaluate the potential opportunities and threats of smart glasses for society?

RQ2: How are these potential opportunities and threats related to consumers' desired and anticipated success of smart glasses?

The remainder of this chapter is organized as follows: First, we provide a definition of smart glasses as well as findings and use cases from prior research. Then, we briefly review technology acceptance theories and their applications on smart-glasses. This is followed by a review of ethical consumerism and consumer citizenship studies. For the empirical part of this chapter we present an exploratory survey study. Survey data was gathered and factor analyzed in order to extract factors that consumers use to evaluate smart glasses. In subsequent analyses, we empirically assessed how these factors relate to consumers' anticipated and desired success of smart glasses, particularly, the degree to which they anticipate and hope that smart glasses will become a successful technology. The chapter ends by discussing the results and providing managerial implications on how to react to the study's outcome.

23 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:
www.igi-global.com/chapter/are-wearables-good-or-bad-for-society/178234

Related Content

Cloud Mechatronic Laboratory for Remote Physical Experiments: Application to E-Learning

Mikhail Ananyevskiy (2016). *Handbook of Research on Estimation and Control Techniques in E-Learning Systems* (pp. 365-375).

www.irma-international.org/chapter/cloud-mechatronic-laboratory-for-remote-physical-experiments/142452

Context as Action in the Teaching of Statistical Concepts: An Activity Theory Perspective

Helen Harth (2017). *Handbook of Research on Driving STEM Learning With Educational Technologies* (pp. 451-470).

www.irma-international.org/chapter/context-as-action-in-the-teaching-of-statistical-concepts/177017

Antecedents of Instructor Intention to Continue Using E-Learning Systems in Higher Learning Institutions in Tanzania: The Influence of System Quality and Service Quality

Deogratius Mathew Lashayo and Julius Raphael Athman Mhina (2021). *International Journal of Technology-Enabled Student Support Services* (pp. 1-16).

www.irma-international.org/article/antecedents-of-instructor-intention-to-continue-using-e-learning-systems-in-higher-learning-institutions-in-tanzania/308461

Using Technologies to Integrate Vocational Learning in Multiple Contexts

Alberto Cattaneo and Carmela Aprea (2014). *Handbook of Research on Education and Technology in a Changing Society* (pp. 675-690).

www.irma-international.org/chapter/using-technologies-to-integrate-vocational-learning-in-multiple-contexts/111879

Public Policy Reforms: A Scholarly Perspective on Education 5.0 Primary and Secondary Education in Zimbabwe

Cleophas Gwakwara and Eric Blanco Niyitunga (2024). *International Journal of Technology-Enhanced Education* (pp. 1-18).

www.irma-international.org/article/public-policy-reforms/338364