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# Young mobile users: Radical and individual – Not

Arho Suominen [a], Sami Hyrynsalmi [b,*], Timo Knuutila [c]

[a] VTT Technical Research Centre of Finland, Innovation and Knowledge Economy, Itäinen Pitkäkatu 4, P.O. Box 106, Turku FI-20521, Finland
[b] Department of Management, Turku School of Economics, University of Turku, Turku FI-20014, Finland
[c] Business and Innovation Development, University of Turku, Turku FI-20014, Finland

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ABSTRACT

The use of mobile phones by youth has stirred a plethora of research in different fields. Literature has analyzed in length the changes and adoption patterns related to the evolving telecommunications industry. This body of knowledge often makes assumptions on the changes in consumer profiles and the value of different features. In this study we take an longitudinal approach by analysing the results of 1 928 responses to an online questionnaire conducted in Finland to students of a university in the Spring 2012 and on against the reanalysis of the responses of the Finnish students of upper secondary schools in the Spring 2001 and study on undergraduate students in 2006–2007. The results indicate that the youth and young adults of Finland, often argued to be an advanced country for mobile services, are surprisingly conservative towards new mobile devices and services. The changes in technology and service offering in a decade, has had a limited impact in attitudes and feature valuation, which sets significant implications to increasing adoption and usage.


## 1. Introduction

Mobile phone technology has evolved significantly since their invention. The device has evolved from a means of voice communication to a multimedia centre and a hub for accessing social networks — depictively called the "a kind of Swiss Army knife, which holds a number of useful tools — even if people almost always tend to use the same ones" (Stald, 2008). Increasing global penetration of mobile devices and more significantly the penetration of devices offering an abundance of features (e.g. feature and smart phones) have changed the nature of the devices. Recently introduced application ecosystems, which offers content for new smart phones, have yet again changed the value proposition of the mobile phone.

Mobile communication has attracted attention by the scientific community and industry. For example, previous studies have described the role of pre-adolescents (Davie et al., 2004), adolescents (Wilska, 2003; Oksman and Rautiainen, 2003) and effort has been invested in studying young adults (Kimiloglu et al., 2010), and quite often in a more narrow subset of young adults, that is, the university students (Economides and Grousopoulou, 2009; Khang et al., 2012; Haverila, 2013). Studies have often focused on different features of mobile phones (Economides and Grousopoulou, 2009; Haverila, 2013) or on identifying consumer groups (Wilska, 2003; Kimiloglu et al., 2010) while some studies have also taken a broader psychosocial viewpoint (Walsh et al., 2011). Our research is focused on understanding the rapid technological change and its impact to human behaviour (Kock, 2004). Specifically we focus on if there is a visible cultural lag, or maladjustment, between the technological and non-material culture (Brinkman and Brinkman, 1997).

With the rapid development of the mobile device, scientific studies are challenged with the pace of development in the telecommunication industry. For example, when Wilska (2003) published results on the mobile phone as a part of young

* Corresponding author. Tel.: +358 2 333 8653; fax: +358 2 333 6885.
*E-mail addresses:* arho.suominen@vtt.fi (A. Suominen), sami.hyrynsalmi@utu.fi, sthyry@utu.fi (S. Hyrynsalmi), knuutila@utu.fi (T. Knuutila).

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people consumption styles, the devices had just settled in being a mass market product. Later, when e.g., Economides and Grousopoulou (2009) published results on the value of different features of mobile devices for young users, we were seeing a vast increase in the technological features offered by the devices. Since we have seen a turning point with the emergence of mobile application ecosystems. Subsequently, there is a need to link the empirical findings and theoretical assumptions made in the plethora of studies to time, and frame the theoretical assumptions with an understanding on the impact of both social change and technological development. Literature has raised the question whether the evolution of technology, in this mobile phones, does change culture and consumer expectations (e.g. Wilska, 2003), and we hypothesize that there is clear evidence for this change in the attitudes and value of technological features.

In this study, we analyse the changes in perceptions and the value of different features after the significant changes in the adoption and technical capabilities of the devices (e.g. the emergence of the smart phone). Motivated by the changes in the devices itself, we strive to uncover how young adults, often perceived as early adopters, have taken up new mobile devices and services and how the attitudes toward the mobile phones have evolved. This study analyses the following research questions:

1. How have the perceptions of young users towards the mobile phones changed while the technology has remarkably advanced?
2. Has the value of different features of the mobile phones changed while the technology has developed?

Both of these questions are aimed to investigate the possible maladjustment between technological advancements and non-material advancements. There is little argument on the fact that mobile technology has advanced, different generations of mobile devices have diffused and been adopted, but to which extent do we see longitudinal changes in users is interesting. We review the changes both in the technology and in the ever increasing embeddedness of mobile devices in young consumers' life, we answer the above mentioned research questions based on data gathered from an online survey. The survey was designed using the studies of Wilska (2003) and Economides and Grousopoulou (2009) as a base. Wilska (2003) was chosen as a baseline due to the availability of the data which enabled us to compare a decade old results with a rather similar demography to the results of 2012 in order to answer the first research question. Our questionnaire replicates also parts of the study by Economides and Grousopoulou (2009). Their study was conducted in 2006–2007, i.e. right before the launch of the first iPhone by Apple Inc. in Europe. Thus, their results enable us to compare how the rise of smart phones has changed the use of the mobile features and services in order to answer the second question.

In addition to analysing the responses to our survey ($N = 1\,932$, thereafter referred as 'D2012'), we reanalysed the answers of selected questions of Wilska's (2003) survey ($N = 637$, respectively referred as 'D2001') with non-linear categorical principal component analysis, and Economides and Grousopoulou (2009) by using median and mode. The results from both of the analyses suggested that the students in Finland have a fairly conservative approach towards new devices and applications, although the country is often claimed to be advanced in mobile service offerings and consumption (see e.g. Wilska, 2003; Bouwman et al., 2007a). It seems that perceptions have remained static, suggesting a cultural lag (a maladjustment) between technological development and human perception.

The rest of the paper is structured as follows: Section 3 presents shortly previous studies in the area. Section 4 explains the methodology used as well as gives descriptive statistics for the questionnaire data. Section 5 goes through the results of the study, followed by Section 6 that includes the discussion of the results and the limitations of the study. Finally, Section 7 draws a short summary of the study.

## 2. Background

Technology, by definition, is the application of scientific knowledge to solve practical problems. This is to say that technology enables humans to solve a practical problem or it offers an improvement on an existing practical solution. Looking at the telecommunication industry, the problem that the mobile phone originally solved was related to communication, diminishing barriers for human interaction, but the industry has since rapidly evolved to solve a number of problems. This technological change has not only been rapid in telecommunication, but rather we have seen an overall increase in technological change and increased complexity of products (for a discussion refer to, e.g., Wang and von Tunzelmann, 2000). To say differently, we are offered new solutions to problems (or improvements to existing solutions) in an ever increasing pace. Some of the problems are familiar and well-known, and we can hance easily understand the value of their solutions, but for certains solutions the problem can be latent to us. Altogether, the process of adoption and the reason behind the decision to adopt technology has been of significant interest to scholars.

Would we look at the process of adoption through the Diffusion of Innovation theory (as a group phenomena) Rogers (1995)[1] or endeavored to explain the users' decision through the Technology Acceptance Model (TAM) (as an individual process) (Davis, 1989),[2] the adoption of technologies involves always a learning process. This learning process includes that the user understands how to utilize the technology and is therefore persuaded by its value. Arguably, the users and the users' social

[1] For discussion on Diffusion of Innovation see for example MacVaugh and Schiavone, 2010.
[2] For discussion and review on TAM and its extensions, see for example, Legris et al. (2003), King and He (2006) and Turner et al. (2010).