

Examining Teens' Non-Use of Technologies

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ABSTRACT

In this work, we discuss approaches that have been helpful for our research studying teens' use and non-use of technology, identify other research that has been formative for our approaches, and discuss open questions and directions for future research into non-use.

Author Keywords

Teens; teenagers; adolescents; non-use; information behavior; information practice.

ACM Classification Keywords

K.4.0 Computers and Society General.

INTRODUCTION

In their recent report on their nationally representative survey examining teens and technology, Madden, Lenhart, Duggan, Cortesi, and Gasser state that "in many ways, teens represent the leading edge of mobile connectivity, and the patterns of their technology use often signal future changes in the adult population" [9, p. 3]. Teens here are seen as heavy technology users who lead the way for technology adoption in the United States. This is connected to the perception of today's teens as "native speakers" of the digital language of computers, video games and the Internet" [12, p. 1]. However, researchers are increasingly challenging the notion that all youth exhibit advanced technology enthusiasm and expertise [1, 1616], and research is increasingly acknowledging the variety of ways and reasons teens use technology [2, 7].

Though we are beginning to study teens' technology use practices with more subtlety, the concept of non-use is still less examined when considering teen technology practices. In an effort to learn more about these technical experiences and practices, including understanding more in relation to mobile technologies, social networks, and the internet at

large, we are working on multiple studies that place emphasis on youth perspectives and approach the idea of non-use as an important factor in understanding how teens view and experience technology.

RELEVANT WORK

There is a large body of research spanning several domains, disciplines, and approaches that has investigated teens' use of technology, but much less work has focused on studying non-use. There are several likely reasons why the concept of non-use has received less research attention: it is easier for researchers to identify and recruit groups of users who use a specific technology than groups who don't; it is easier for users to describe, explain, and demonstrate use practices than non-use practices; and it is often artificial to bifurcate groups of people into users and non-users, as use typically falls along a frequency continuum, as well as personal preference and access continuums. Still, a variety of work has examined technology non-use, typically focusing on a specific technology or type of system.

Working with adults between the ages of 21-96, Selwyn conducted a survey finding that while 46.7% of the participants used computers "fairly often" or more, 38.4% were "absolute non-users" [15, p. 277]. Interviews were conducted with non-users, lapsed users, and rare users, and uncovered "four broad themes for non-use...no interest or need, no knowledge, barriers (e.g. lack of time, old age, poor health), or no access to a computer" [15, p. 281]. Selwyn argues "whilst the opportunities to access and use computers are undeniably structured and mediated by factors relating to the household, family, workplace as well as age, class and gender, we cannot deny individual agency in contributing to the fluidity of people's relationships with technology" [15, p. 289].

Social media and SNS use has been an important theme in research into non-use. Tufekci examined non-use of SNS in adults, and argues for "differentiat[ion] between the different modalities of Internet practices," because though users and non-users showed different tendencies of use of what she terms the expressive Internet ("technologically mediated sociality"), their use of the Internet for instrumental purposes was similar [17, p. 560]. Further, she highlights that non-users of SNS do use instant message services and "are not reticent toward communicating via the Internet, nor are they closed to the possibility of genuine social interaction through online methods" [17, p. 560].

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These findings highlight that personal preferences can play an important role in how individuals engage or do engage with social technologies.

Hargittai's work on the differences between users and non-users of SNS finds that qualities of gender, race and ethnicity, and parental education are each associated with SNS use [6]. Based on surveys conducted with college students, Hargittai finds that women are statistically significantly more likely to use SNS than men, and that "both context of use and experience with the medium are related to the adoption" of SNS [6, p. 285]. She finds that race and parental education play a role in SNS adoption; in this study, Hispanic students are less likely than White students to use Facebook, and while there is an apparent "positive relationship between parental schooling and the use of Facebook and Xanga...a negative relationship between parental education and the use of MySpace" is observed [6, p. 289], potentially indicating "systematic differences" in site adoption [6, p. 292].

Lampe, Vitak, and Ellison [8] examine heavy, light, and non-users of Facebook, acknowledging that though individuals might be users of a system, their practices may differ from other users. The authors find that the more individuals agreed with statements describing Facebook's utility, the more likely they are to use the site. Among those who do not or no longer use the service, they find that individuals "did not see the benefits of joining or felt that the benefits of participating were not worth the costs" [8, p. 8]. Contrary to other research, the authors also find a difference in the levels of bonding social capital, with non-users and heavy-users reporting higher levels than light users, who had relatively low levels. This work highlights the importance of social factors in examining technology use, and demonstrates that different spectrums of use are correlated with diverse experiences and perspectives.

While most research on non-use has historically focused on adults, as boyd and Marwick highlight, for teens there are social expectations that can encourage online participation and may result in negative outcomes if teens do not use a given technology. "If friends and peers gather in person, teens feel the need to be physically there to feel included. If the gathering takes place online, being online becomes socially critical," or as one of their participants states "you're expected to be on Facebook" [3, p. 8].

In another work that examined youth, García, López-de-Ayala, and Catalina [5] studied the ways social network use influences Spanish adolescent online practices, including a comparison of regular users of social networks with non-users. Breaking their sample into intensive users, occasional users, and non-users, they find that with the exception of network games, intensive users of social networks "always show a tendency to make more frequent use of the different applications provided by the Internet," including browsing websites, email, downloading files, instant messaging, and shared videos and photos [5, p. 201].

OPEN QUESTIONS

These works highlight the importance of agency, choice, personality, and access in non-use of technology, as well as the social constraints that can work against non-use. However there are still open questions: How does the use of one technology impact the non-use of other technologies? How do we consider non-use of affordances in comparison to non-use of an entire system? Do these issues work differently for teens? How so?

POTENTIAL APPROACHES

Our research works to answer some of these open questions using a variety of methods and a youth-oriented perspective.

An Ecological Perspective on Spectrums of Use

In her work examining teens' everyday life contexts, drawing on Savolainen's theory of Everyday Life Information Seeking [13], Magee is examining information ecologies [11], which prompt consideration of people, values, practices, and technologies together. Within this framework, the study focuses on the idea of spectrums of use, ranging from non-use through temporary, low, moderate, and heavy levels of technology use, informed by Selwyn's avoidance of dichotomous descriptions of technology use and non-use [14]. By using an ecological approach, this study recognizes that use of technologies may inform the use of other technologies, through preference and choice.

Similar to Lampe et al. [8] and Garcia et al. [5], this also study recognizes that users of systems may be "light users," but also works to take into account the idea that use is not static and can change over time. In order to operationalize these concepts, she has developed a study design that assesses the technologies teen participants have access to, then examines the variety of use practices through a diary study, and specifically probes the non-use of available technologies during an interview, which also includes a discussion of technologies that used to be used but are not included in current technology practice.

A Deeper Focus on Question-Asking Practices

In addition to this work, our research group is conducting an examination of youth question-asking practices in online social networks [4]. The project makes connections between the perspectives and priorities of teens and school and library policies and technology practices [10]. While this study has a focus on a specific activity, the concept of spectrums of use has proved to be helpful in examining when, where, and how teens ask questions online, but also in revealing times (and topics) where they do not.

Looking more broadly at teens' technology use and non-use decisions and behaviors, none of the teens in our studies have claimed to be complete non-users, but their technology behaviors vary widely in enthusiasm and approach. Of particular note are the many teens who engage

in self-regulating behaviors—a type of intentional non-use—for a variety of reasons, such as privacy concerns, time-wasting concerns, and audience awareness that leads them to spend their time online interacting with select communities while avoiding others.

NON-USE AND INFORMATION PRACTICES

We examine the non-use of technology with the understanding that as technological practices are an important element in information behavior and practice, so too are instances of non-use. By investigating non-use, we can learn more about the affordances of specific technical systems, the social and cultural influences that interact with technological and informational practice, and the needs and preferences of the people we design for.

WORKSHOP CONTRIBUTIONS

Several papers have been formative for our work and would help build a substantive living bibliography.

Neil Selwyn has long been interested in non-use and low-use, and in addition to this 2003 work [14], his 2006 [15] and 2009 [16] articles delve deeply into these topics, touching on debates about the digital divide and discussion of today's youth, considered by some to be “digital natives.”

Lampe, Vitak, & Ellison [8] examine different types of users (heavy and light) as well as non-users of Facebook, highlighting the differences in types of use as well as between those who engage in social media and those that do not.

García, López-de-Ayala, and Catalina [5] contribute in a number of ways by providing a multicultural perspective that acknowledges the diversity of types of use and non-use, and specifically examines adolescents' experiences.

Guiding questions for the workshop could include the following:

How do we as a research community define non-use? What can non-use tell us about use, and vice versa?

How do we examine non-use of a technology in relation to the use and non-use of other technologies?

How do we research different user groups' (such as teens) experiences of non-use? What considerations should inform our research when examining different ages, abilities, socio-economic backgrounds, racial and ethnic identities, etc.?

ACKNOWLEDGMENTS

This material is based upon work supported by the National Science Foundation Graduate Research Fellowship under Grant No. 2011121873 and the Young Adult Library Services Association (YALSA). Additionally, this research is funded by The Institute for Museum and Library Services (IMLS) National Leadership Grants.

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