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Increasing inequalities in what we do online: A longitudinal cross sectional analysis of Internet activities among the Dutch population (2010 to 2013) over gender, age, education, and income

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ABSTRACT

We investigate types of Internet activities among a representative sample of the Dutch population from 2010 to 2013. We examined usage patterns of seven types of Internet activities (i.e., information, news, personal development, commercial transaction, social interaction, leisure, and gaming) and related these patterns with gender, age, education, and income. Activities related to news, personal development, commercial transaction, and social interaction increased in popularity. For most capital enhancing activities, men, younger people, higher educated people, and people with higher than average incomes were prominent. These observations, however, are subject to change. The Internet seems to provide increasingly more capital-enhancing opportunities for those with higher education and income, which would accordingly reinforce their already strong positions in society.

1. Introduction

As of 2014, the diffusion of the Internet has reached a level as high as 84% in Germany, 87% in the United States, 91% in South Korea, up to 95% in the Scandinavian countries, and 96% in the Netherlands (ILS, 2014). In countries with such high diffusion rates, the Internet is becoming a basic requirement for social inclusion. Arguments about the Internet affecting social inclusion are reflected in the so-called 'digital divide' discourse. Digital divide-related research often takes one or more types of Internet access and investigates how these access points relate to socio-demographic variables. Access types that have gained attention include physical and material access, attitudinal access, skills access, and usage access (e.g., Blank and Groselj, 2014; Chen and Wellman, 2004; DiMaggio et al., 2004; Katz and Rice, 2002; Mossberger et al., 2003; Ono and Zavodny, 2007; Van Deursen and Van Dijk, 2011; Van Dijk, 2005). Usage access, or the type of Internet activities that users engage in, is especially interesting as it is the last stage of Internet appropriation or "the ultimate goal of trying to obtain access" (Van Dijk, 2005, p. 95). In countries with high rates of Internet connections (physical access), what people do online increasingly reflects traditional media in society and known economic, social, and cultural relationships that exist offline, including inequalities (e.g., Witte and Mannon, 2010; Zillien and Hargittai, 2009).

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In the current investigation, we apply a validated cluster of seven activity types (information, news, personal development, social interaction, leisure, commercial transaction, and gaming) among a representative sample of the Dutch population in the years 2010, 2011, 2012, and 2013. Cross-sectional data are repeated to consider patterns of change at the aggregate level. Most investigations lack detailed analyses about how activity patterns have developed over time, which is unfortunate because it is important to understand how Internet use has changed for evaluating the influence of policy initiatives, shifts in commercial markets and the evolving technology of Internet use (White and Selwyn, 2013). Furthermore, several observations make investigating how the type of activities people engage in online has changed over the past few years worthwhile. As in other developed countries, in the Netherlands the Internet landscape has changed. Searching for information has been one of the most popular uses of the Internet from the very beginning, even as new platforms and mobile devices continuously reshape the ways in which the Internet is used (Purcell, 2011). However, the ever-increasing popularity of social networks (e.g., Facebook and Twitter) drives all types of social interaction. In the Netherlands in 2013, 81% of the Dutch population over 16 report using a social network site (Van Deursen and Van Dijk, 2013). Furthermore, mobile Internet access on tablets and smartphones, which not only facilitate applications of social interaction, but also leisure and gaming activities is increasingly popular (Van Deursen and Van Dijk, 2013). Internet users increasingly obtain access through mobile devices and skip the traditional means of access through personal computer use (Napoli and Obar, 2013). Opportunities for personal development also increased in the Netherlands, hence the growing number of job searching engines and online educational possibilities (Van Deursen and Van Dijk, 2013). If we apply the normative judgment that some activities enhance capital more than others (e.g., information and personal development versus leisure and gaming), then repeated cross sectional data can reveal how central the Internet has become in everyday life. The first research question is as follows: *Did the type of online activities that people engaged in change between 2010 and 2013*?

The study's second contribution follows common digital divide research by focusing on gender, age, education level, and income differences, this time in relation to the observed activity patterns. Although several studies address the relationship between socio-demographics and type of Internet activity, little evidence exists about how this relationship has changed over time. For example, for popular entertainment activities, one might expect decreasing socio-demographic differences. However, this expectation may not be met for activities that require higher cognitive abilities or Internet skill capabilities (e.g., information searches or online educational opportunities). The current study sheds light on whether inequalities in online activities engaged in are widening or narrowing. Such investigations are necessary because scholars suggest that the type of activities people engage in has the potential to reproduce and even reinforce offline forms of inequality (DiMaggio et al., 2004; Hargittai, 2008; Van Dijk, 2005). The studied time period (2010–2013) is especially interesting because the economic crisis has created a growing class of low-income people in the Netherlands (OECD, 2013). These people are increasingly excluded from the mainstream economy and society at large. The second research question is as follows: *How do gender, age, education, and income relate to types of Internet activities and are these relationships changing*?

2. Theoretical background

2.1. Digital inequality

In early 2000, Compaine (2001) concluded that the rapidly decreasing cost of Internet access was narrowing the digital divide. Tambini (2000) also argued that decreasing costs and increasing user-friendliness of computing technologies were socially leveling. He believed that existing patterns of gender, class, and race inequalities had weakened. However, several traditional perspectives in defining social reproduction contest such predictions of egalitarian societies. For example, scholars who follow the ideas of Weber (1978) argue that 'technological repercussion and economic transformation threatens stratification by status and pushes the class situation into the foreground' (p. 938). According to Kuttan and Peters (2003), technological repercussions (e.g., Internet access) potentially affect equal social, educational, political, and economic opportunities. From collected data, they concluded that the digital divide has formed an 'information underclass'. The Internet functions as a commodity through which the distribution—at least initially—follows existing gender, class, and race divisions (Selwyn, 2006; Van Dijk, 2005; Willis and Tranter, 2006). Witte and Mannon (2010) argued that Internet access should be understood as an asset to maintain class privilege and power and that capitalist relations of production are maintained, as the inequalities upon which they rest are reproduced from one generation to the next. The intensive and extensive nature of Internet use among well-to-do and well-educated people suggests an exclusive lifestyle that is not accessible for those with less capital (Van Dijk, 2005; Witte and Mannon, 2010). By differentiating users' chances in life, use of the Internet can contribute to reproducing social inequalities (DiMaggio et al., 2004; Hargittai, 2008; Van Dijk, 2005).

Scholars who use Bourdieu's (1984) concept of social capital to explain different phenomena related to the reproduction of social inequality see social class broadly as a range of cultural, economic, and social resources that people access (e.g., Kvasny, 2006; Robinson, 2009). Resource access differences have the potential to reinforce each other when applied to the Internet (Van Dijk, 2005). There are three important requisites for Internet use: economic capital to acquire the supporting means (e.g., a personal computer and Internet subscription); social capital to learn how the Internet is used; and cultural capital to cope with the diverse amount of available content. When these requisites are met, the Internet can potentially increase economic capital (e.g., by buying profitable resources online), social capital (e.g., by extending physical networks to virtual ones, increasing the sense of community and civic engagement) (Katz and Rice, 2002), and cultural capital (e.g.,