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Negative outcomes of Internet use: A qualitative analysis in the homes of families with different educational backgrounds

Anique J. Scheerder, Alexander J. A. M. van Deursen, and Jan A. G. M. van Dijk

Department of Communication Science, University of Twente, Enschede, The Netherlands

ABSTRACT

This study employs a qualitative approach to examine whether and why some societal groups are disadvantaged more by their Internet use than others do. Due to the quantitative nature of most digital divide studies, thorough explanations for why different outcomes exist are lacking. Interviews were conducted with 48 Dutch families selected on the basis of educational level (high or low) and household characteristics (children and marital status). A distinction was made between the types of negative outcomes that families are *confronted with* and how they *cope with* those outcomes. The results show that the *confrontation with* negative outcomes of Internet use in itself seems similar for both educational groups. However, the way Internet users *cope with* negative outcomes differs between the two educational groups. Members of highly educated groups mostly try to take control themselves when faced with a negative outcome, while members of less educated groups often just experience negative outcomes and do not remedial actions.

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Digital divide; digital inequality; disadvantages; educational level; negative outcomes; qualitative approach

Introduction

In the past decade, research on digital inequality has evolved away from the binary distinction on the basis of whether or not people had Internet access – “haves” and “have nots.” When rates of Internet access in Western countries increased, scholars proposed a second-level digital divide, wherein inequalities in Internet skills and types of usage are central (e.g. Zillien and Hargittai 2009; Blank and Groselj 2014). More recently, a third-level digital divide has come into focus, wherein the issue of concern is differences in outcomes that individuals obtain from Internet use (Wei et al. 2011; van Deursen and Helsper 2015). Here, the researchers have tended to focus on the beneficial outcomes of Internet use. However, Internet use can also result in negative outcomes. Just as beneficial outcomes could mitigate the digital divide, negative outcomes could deepen it – they often result in reduction of one’s resources (van Dijk 2019). Therefore, negative outcomes are also a fundamental element of what the Internet actually means to its users. However, few studies concerning the third-level digital divide have focused on this



negative side (see Blank and Lutz 2018 for one that does).

In this article, we investigate negative outcomes of Internet use. We study which social groups are most likely to be affected by the negative outcomes. We are especially interested in the level of educational attainment, as it is an indicator of socioeconomic status and the most important predictor in all levels of digital divide research (e.g. Blank and Lutz 2018; van Deursen and van Dijk 2011; Wei and Hindman 2011). We study the *confrontation with* negative outcomes of Internet use, in terms of the *type of outcomes* Internet users experience, and the way that people *cope with* the outcomes they face. Importantly, we step back from the quantitative approach that dominates digital divide research and provide a qualitative in-depth analysis in which the social context, specifically the home context, is taken into account.

Theoretical framework

Corresponding offline and online domains

While few digital divide studies look at negative outcomes of Internet use, they are extensively covered in

CONTACT Anique Scheerder  a.j.scheerder@utwente.nl  Department of Communication Science, University of Twente, 7500 AE Enschede, The Netherlands.

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the wider literature. To create an inventory of potential negative outcomes that Internet users might experience, we use Helsper's (2012) corresponding fields model, which conceptualizes links between *social* and *digital* exclusion. Helsper sets forth that possession of the right skills and engagement with certain types of Internet activities does not automatically lead to positive outcomes. She proposes that one's online and offline resources influence each other (e.g. exclusion in *online* domains is a product of one's *offline* circumstances and, in turn, the former impacts the latter), such that online fields correspond with those in the offline world. The term "fields" refers to "spheres of influence in everyday life as well as frames of reference for individual action" (Helsper 2012, 404). This conceptualization of fields draws on Bourdieu's (1984) theorization of social inequalities in forms of economic, cultural, and social capitals. According to Helsper, the links between social and digital exclusion are strongest between corresponding fields of offline and digital resources, where the primary fields are economic, cultural, social, and personal in nature.

Resources in the economic field relate to capital and wealth and refer to *income*, *employment*, or *education*. In online outcomes, this could be, for example, obtaining savings via e-commerce, a job via online platforms, and knowledge via MOOCs (massive open online courses). Resources in the cultural field relate to *belonging* and *identification* with certain sociocultural groups, which have shared norms and behaviors (Helsper 2012). Cultural outcomes accordingly refer to those related to cultural identity resources, such as gender and ethnicity (Maccoby 2007). Resources in the social field refer to ties with individuals or networks that could provide an individual with support (Portes 1998). Those networks can be *personal*, *formal*, or *political* (Helsper 2012). The more ties one has and the stronger those ties are, the higher the inclusion in a domain (Helsper 2012).

Recent studies based on the corresponding fields model show that those who are less fortunate offline also obtain fewer benefits while online (van Deursen and Helsper 2015; van Deursen et al. 2017). For example, those with fewer offline social resources, including a lower number of informal ties, obtain fewer positive social outcomes online than those who have a higher number of ties. While Helsper (2012) and other follow-up studies (van Deursen and Helsper 2015; Helsper, van Deursen, and Eynon 2015) have focused on positive outcomes of Internet use, it is likely that similar findings apply to negative outcomes. The

negative outcomes can also be classified in the same four main fields, as we will see in the following sections.

Negative economic outcomes of Internet use

The negative outcomes of Internet use in the economic field often have to do with one's working or academic life and relate to *education* and *employment* in the corresponding fields model. On the one hand, (excessive) Internet use often leads to neglect of work and school duties (Spada 2014), and, work pressure might well increase because of the Internet (Heijstra and Rafnsdottir 2010).

Outcomes with direct financial consequences relate to *property* resources. These outcomes are most often associated with specific Internet activities, such as online shopping or gambling. For example, when avid online shoppers spend too much money or perform "unplanned buying" that does not fit the monthly budget, it could lead to forced foregoing of other pastime activities, including social activities with family or friends (Niu and Chang 2014). Gambling could have more severe consequences, including getting into debt.

Lastly, negative outcomes are related to *income* resources, e.g. financial loss suffered as a result of online fraud.

Negative cultural outcomes of Internet use

Many of the cultural outcomes mentioned in the literature are beyond one's control and are not directly linked to an individual's specific Internet activities. They mostly relate to an individual's norms and behavior and correspond with the *identity* and *belonging* categories in the cultural field. For instance, even when child pornography does not directly target the victim it can still be regarded as harassment by Internet users when they accidentally come across it. Other activities regarded as cybercrime include identity theft, phishing, and stalking (Wall 2005). There are also negative outcomes related to cyberbullying. Although age is often assumed to be an important predictor of cyberbullying, as it is mostly linked to youth and adolescents, adults also experience cyberbullying in their workplace (Privitera and Campbell 2009) or on social media (Kattari and Hasche 2016). In general, negative outcomes in the cultural field can evoke negative experiences, such as sadness or anxiety.

Negative social outcomes of Internet use

In the literature, social consequences of Internet use are often linked to social networking and mostly relate to *personal networks* within the social field. For example, there are studies on the influence of social

media use on existing social ties or relationships, indicating that this Internet activity enhances an individualization process (e.g. Vriens and van Ingen 2017) or weakens existing social ties (e.g. Bargh and McKenna 2004). Other studies indicate that social media use leads to neglect of social activities, sacrificing of real-life relationships, loneliness, and other such negative outcomes (Kuss 2013; Spada 2014). Negative outcomes also come about in everyday life situations, e.g. annoyance caused when someone is occupied with the mobile phone at the family dinner table. Such outcomes can be perceived as negative, though not as detrimental as the weakening of existing social ties. Similarly, negative outcomes in *formal* or *political networks* can also be placed on this field.

Negative personal outcomes of Internet use

Negative consequences that relate to the personal field are often associated with the individuals' mental or physical state, such as aggression and hostility, neglect of health, detrimental changes in sleep and eating patterns, anxiety, and curtailing of other pastime activities (Chen and Gau 2016; Kuss 2013; Singh, Fox, and Brown 2016; Spada 2014). These outcomes relate to *health* within the personal field in the corresponding fields model. There are also physiological harms arising from bad physical posture and repetitive actions when using a device, e.g. backaches, eyesight deterioration, headaches, and repetitive action disorders (Suris et al. 2014). Beyond *health* outcomes, there are other outcomes that relate to the personal field, e.g. one can feel sad or lonely after performing specific activities online (*leisure*) or can get confused about any particular subject in the tangle of information that can be found online (*self-actualization*).

Coping with negative outcomes of Internet use

The strategies Internet users apply to cope with the different types of negative outcomes are likely to differ. Examples include seeking support (Dehue et al. 2012; Kowalski et al. 2008), claiming that being victimized by fraud does not truly bother them, ignoring persons who send offensive messages (Roth and Cohen 1986), and blocking certain Web sites in the case of privacy concerns (Kowalski et al. 2008). In general, coping strategies can be classified as *preventive coping*, *reactive coping*, and *having no way to cope* (Parris et al. 2012). Preventive coping strategies could implicate the setting of age appropriate limits on certain platforms or learning about signals of a scam. Reactive coping strategies can involve reporting online abuses to platform operators or deleting online

contacts from social media. When people find that they have no way to cope with certain negative outcomes, it might be that they simply do not know how to act, but it might also be that they do not feel the need to take action in order to diminish the impact of an outcome or to prevent the specific outcome from happening again. If Internet users apply this strategy, we denote it here as a *passive* coping strategy.

Who is disadvantaged the most?

All of the outcomes in the inventory can potentially be experienced by anyone using the Internet (Suris et al. 2014). However, some users might be more prone to negative outcomes than others are. Educational level, an important indicator of differences in Internet skills and types of usage, was found to be a determinant of positive outcomes of Internet use (Scheerder, van Deursen, and van Dijk 2017; van Deursen and Helsper 2015). In general, the highly educated obtain more benefits from using the Internet than the less educated do, as people's inability to obtain a certain benefit in one domain of society often transfers to other domains (van Deursen and Helsper 2018). For instance, indications of relationship between educational level and negative outcomes have been found for gaming addiction (Kuss et al. 2014). Based on the corresponding fields model, we expect the highly educated to be less afflicted by negative consequences of Internet use than the less educated. To empirically investigate, we need to distinguish between the *confrontation with* negative outcomes, as reflected in the *types of outcomes* people face, and the way people *cope with* them. On the one hand, the highly educated, who tend to be more frequently online and engage in a wider range of activities (Blank and Groselj 2015; van Deursen and van Dijk 2014), are confronted with a greater diversity of negative outcomes of Internet use. On the other hand, the less educated might be less capable of coping with certain outcomes.

Method

Participants

In-depth interviews were conducted with 48 Dutch heads of family over six weeks in February and March of 2018, who answered open questions about negative outcomes of Internet use. Participants were recruited via distribution of (digital) flyer on social media and door-to-door canvassing by researchers. When families expressed interest in participating, they subscribed to a personalized Web site and received further

Table 1. Composition of participating families.

	Less educated group (N= 24)	Highly educated group (N= 24)
Families with children living at home	15 (5)	16 (3)
1 child	3	5
2 children	5	10
3 or more children	7	1
Adult children (not living with parents)	7	4
Families without children	2 (2)	4 (2)
	24	24

Notes. Aggregate numbers for categories and overall grand totals are in bold. Number of single individuals and single-parent families are in parentheses.

information by telephone. Families were selected on the basis of quota sampling for educational level (high or low) and household characteristics (children and marital status, see Table 1). Families whose heads had intermediate vocational education and everything below were classified as “less educated” (LEA), and ones whose heads had higher vocational education and all educational levels above that were “highly educated” (HEA). When one head of the family had intermediate education and less and another higher vocational education and above, it was classified as HEA. In the case of a two-parent family or a couple without children, both heads of the family were interviewed, and in the case of a single-parent family, only that parent was interviewed. There were an equal number of LEA and HEA families. Household characteristics were determined on the basis of two variables: having children (living at home) and marital status (Table 1). While the distribution of families with and without children is almost equal in our sample, the percentage of single parents is higher in the less educated group than in the highly educated group. This disparity is representative of the Dutch population (Central Bureau for Statistics 2017).

Procedure

The in-depth interviews were conducted at the family’s homes. Before the start of every interview, the head(s) of all participating families completed an online questionnaire. It listed negatives outcomes based on the inventory of potential outcomes that we developed and categorized in accordance with Helsper’s (2012) framework of economic, personal, cultural, and social fields (Appendix A). Participants could indicate which of the negative outcomes they (had) experienced. They were also given an opportunity to indicate their own negative outcomes. Thus, a deductive–inductive approach was employed in which outcomes were primarily derived from the corresponding fields model (deductive), while participants could later come up with their own

outcomes, which were then analyzed and, if possible, categorized under one of the corresponding fields (inductive). Before each interview, participants were asked to give their informed consent after the research aim and procedure were explained.

Analysis

Each interview was transcribed to identify themes. A coding scheme was established, based on the corresponding field model of Helsper (2012). Thereafter, overarching themes in the coding scheme were categorized into the economic, personal, social, and cultural fields and subsequently subcategorized into corresponding categories and negative outcomes. All transcripts were then coded in Atlas.ti. Modifications were made to the coding scheme whenever necessary, e.g. when a “new” outcome emerged from a transcript. Then, another round of coding was performed in order to apply modifications consistently to all transcripts. In addition to the first researcher, a second coder was assigned to code a sub sample of transcription (10% of the transcripts), in order to control for the reliability of the coding by calculating an intercoder reliability. A Cohen’s kappa value of .82 was achieved, denoting good agreement between the coders. Lastly, the core findings corresponding with the four fields were identified.

Results

Most negative outcomes in the inventory of potential outcomes were mentioned by one or more participants. Some additional outcomes were mentioned and are classified and discussed under the corresponding field below (as our original inventory of possible outcomes was not intended to be all-encompassing).

Thereafter, we discuss differences between LEA and the HEA with regard to negative outcomes of Internet use. In this part, we examine who is disadvantaged the most by Internet use in terms of *confrontation* and *coping with* outcomes and why that is the case. Here, the relative differences in *confrontation with* and *coping with* outcomes between the two educational groups are mentioned for each outcome.

Economic

Income and property

In relation to *income* and *property*, more than half of the HEA-participants and a minority of the LEA-participants indicated that they had experienced fraud or scams online at least once, the consequences of which

were mostly financial. In addition, some of the LEA-participants said that their trust in online trade had decreased so much that they were hesitant to participate in online selling or buying, while HEA-participants mainly said they had become somewhat more cautious and learned about indicators of online fraud to prevent such practices in the future. In this way, HEA-participants applied a preventive coping strategy, while LEA-participants seemed more passive, as they just refrained from conducting certain activities online.

HEA-participants mentioned twice as many times as LEA-participants did that they had unnecessarily spent money online. Participants from both groups noted that through the Internet, they more often bought something impulsively or something that does not work out well, such as a toy that appears to be different in real life than in its online presentation. In both groups, unbeneficial forms of online shopping, such as making bad bargains or engaging in impulsive buying, resulted in financial loss. However, the impact of the loss was different for the two groups. LEA-participants often indicated they could have used the money better for other purposes, while the HEA-participants often spoke in terms of having “too much stuff in the home” and “buying things we don’t really need, though not necessarily with consequences.” In this domain, a few participants also mentioned having become a donor to a charity or a subscriber of a fund they did not really want to support. Some HEA-participants said that they had set strict limits for online shopping in order to stop themselves from needless spending, applying a preventive (in some cases, reactive) approach. In turn, most of the LEA-participants indicated they do not mind spending money even though there was no need per se. Some HEA-participants also mentioned not having to worry about spending on online shopping. The difference in spending limit between the two groups might be relevant here.

Too much stuff; that’s basically it. Every time the postman delivers a package, we think, ‘oh okay,’ and ‘where should we put this?’ ... But no, no financial consequences – F, HEA, family of 5

I’ve now also ordered a mouthguard. It was only 1 euro, but I ordered it and now it’s just laying here and... actually I do know that I’m probably not going to use it. But, well, for only a euro. It’s not like you spent too much money ... – F, LEA, family of 4

The same kind of difference appears between the two groups in terms of the consequences of gaming and gambling online. Participants from both groups engaged in these activities, but for HEA-participants, financial

risks were often not an issue, while LEA-participants did, in some cases, experience hardship due to their loss.

Well, I have to be careful that I’ll remain able to feed the kids. The bills and food have priority. Normally, I should have something extra as a buffer, but sometimes, I already spent it on gambling. – F, LEA, family of 4 (single mother)

Education and employment

Major differences exist between LEA and HEA concerning *work pressure*. In the case of the few LEA-participants who indicated feeling work pressure due to the Internet, this pressure was mostly caused by an increased number of daily tasks or by organizational matters that were performed via the Internet. The increased pressure for this group therefore mainly existed while on the work floor during work times, while for HEA-participants the workload and pressure got carried over from their workplace to their homes. Presumably, this is mostly caused by the fact that employees become accessible 24/7 through the Internet and are able (or even expected) to work whenever and wherever they are. As a consequence of increased work pressure, HEA-participants often seemed to be harmed by stress, mental illness, and poor sleep. In addition, some HEA-participants mentioned that they needed to rearrange their private lives such as leisure activities and family life in order to make room for work. Work pressure came at the expense of job satisfaction for some HEA-participants, while respondents from both the HEA and LEA groups said that they sometimes have to skip through some of their work because of the increased number of tasks. HEA-participants often talked about ways to diminish the influence of work pressure on their private lives, such as by turning off their phones or e-mail, thereby applying a reactive approach that LEA-participants did not apply.

Well, our complete system runs on the Internet, so I can log in and work everywhere I want. Sometimes I see issues of which I think, ‘actually I need to do something about this now.’ Sometimes that goes at the expense of a good night’s rest.” – M, HEA, family of 4.

I’ve just been at home for 15 months because of a burn-out. I’ve now got my work and private phone separate. And when I’m home, I’m not checking my mail, because if I do that, I’m screwed. – F, HEA, family of 5

We used to fill out a ‘caring file’ at the client’s home. Now, we have to perform all kinds of administrative tasks on the iPad, and that takes more time. Yes, we do get paid for the extra demand because it’s during working hours, but still. – F, LEA, family of 5

Social

Informal networks

About half of the HEA-participants and a quarter of LEA-participants see *social pressure* as one of the primary negative outcomes of Internet use, leading to consequences such as stress, irritation, and the fear of missing out. Participants of both groups mentioned that their constant availability through the Internet and the implicit expectations of availability that comes with it caused them to feel pressure to respond as soon as possible to all messages. Participants in both groups also felt they were held accountable by others for not responding to online communication, especially family and friends. Some of the HEA-participants said that they imposed this pressure on themselves even when others may not expect them to respond. These participants tried to diminish this tendency by discussing it with others or by defining limits for themselves and being strict in staying within them. LEA-participants mostly did not actually act to diminish this social pressure (passive coping strategy).

I think it's a bit like I want to belong to a group and I don't want anyone to forget me. Therefore, I try not to forget them either. – F, LEA, family of 3

Yes, I do feel the pressure to respond immediately. But I do try to diminish it; it's something that I teach myself not to do. I now decide which e-mails are important enough to answer immediately and which aren't. So now the pressure is actually coming from myself. – M, HEA, family of 4

Social disappointment or friction in an existing relationship is another outcome in the *informal* or *personal networks* domain. In both groups, this social disappointment is mostly caused by misinterpretation of communication or social pressure, which is sometimes due to a lack of intonation or (facial) expressions in online communication. Mainly participants aged over 50 years indicated they still prefer to interact with friends and family via offline channels for this reason. Some HEA-participants also declared that the Internet caused social disappointment because they have now to know “the real person behind someone” they already knew offline – for example by posts on social media.

We received a Whatsapp message in which a certain disappointment was expressed. I thought: why wouldn't you tell me this face-to-face? [...] Such a message can be interpreted in many ways. Face-to-face you can at least discuss things and start a conversation. This way it just escalated, the relationship has declined, yes. – M, HEA, family of 4

Sometimes I'm asked: 'haven't you read it yet, on Facebook?' Well, not always. [...] When I see messages I often think, 'Should I like this or not? Would they do the same with my messages?' That's how I handle it. – F, LEA, family of 2 (single mother)

Another negative social outcome, mostly according to HEA-participants but also to a few-LEA participants, is the *individualization* of society. Participants stressed that in many social or domestic occasions, individuals remain occupied with their phones or other devices and social interaction is now an exception rather than the norm. HEA-participants noted that it is harder to spend “quality time” together than before and the fact that a deliberate effort is too often made to create it makes matters worse. They also stressed the importance of setting the right example for their children. Some LEA-participants also noted the detrimental impact of device use on social interaction, but they did not feel the need to take action. When participants were asked whether relationships became more superficial as a result of this tendency, the answers were mixed. HEA-participants mostly answered that they agreed, offering examples of offline social interactions they missed from the pre-Internet days. Some of the participants who agreed with this added that, on the one hand, the Internet might make some communication (and therefore some relationships) superficial, but on the other hand, it is easier to stay in touch via the Internet. The participant responses quoted below illustrate the different coping strategies the two groups adopted: Where LEA-participants were often passive in tackling this outcome, HEA-participants were more inclined to take action.

Some time ago we were away for the weekend with a group, and everybody was occupied by the Internet all the time, that's a downside too. There are no good conversations anymore, everybody is 'in his or her own world'. But no, I don't point it out to them. – F, LEA, family of 4 (adult children: moved out)

Something we are aware of lately, is how fast we're all turning to the Internet and that we are together in the room but everybody is doing their own thing. We regularly address it: 'could you put that thing away, please?' Or on Sundays, we play board games together. Even if you don't even like to play games, at least you're doing something together on a day off. It's just so easy to grab the phone and be in your own world, but you easily forget to engage in a conversation with the children or with each other. That's really the danger. – M, HEA, family of 4

Formal/civic

With regard to formal resources, negative outcomes mainly relate to distrust of information and

institutions. Although minorities of both groups harbored such distrust, LEA-participants indicated that it arises from the fact that they “don’t miss anything of what’s going on in the world anymore,” and so they had more insights in, for example, the way the country is governed or how information is manipulated. They also mentioned that current controversies, such as fake news and media framing, made them uncertain of what to believe and what not to, with distrust arising as a consequence. LEA-participants often said that they saw such things as a part of the current online world and thus did not think there was a way they could or should act about it.

There’s much news that is framed differently and that’s only half-true. I don’t indiscriminately believe what I hear anymore. – F, LEA, family of 4

Sometimes you see bits of news items about political figures, which you wouldn’t have known without the Internet. I don’t think what is called fake; news is always fake... A while ago I read something about a vacation home of a party leader, well, that I don’t trust. – H, LEA, family of 4

HEA-participants mainly distrusted the information they find online because anybody is able to put anything online as if it is the truth and that their posts might stay online forever. In addition, they had more knowledge concerning certain mechanisms, such as how information gets manipulated easily. Therefore, they were also more eager for and able to tackle the problem of unreliable information by consulting several reliable sources and tracking down which interests are involved (preventive coping strategy). Further, HEA-participants seemed more concerned about what these developments meant for their society as a whole, both now and in the future. They were not only worried about their own information provision, but they also thought about ways to diminish or bypass mechanisms such as fake news.

Fake news. Previously, you used to search for a clear scientific relationship, nowadays it is often refutable. But still it is taken as the truth by society. I think that really is a bad thing, opinions are mistaken for facts. – F, HEA, family of 4

The problem is that everyone can publish. And every opinion is on the Internet. Truth, opinions and facts are increasingly harder to distinguish. – M, HEA, family of 5

Political networks

A handful of participants in both groups also talked of distrust of institutions, specifically political ones.

Both HEA- and LEA-participants mentioned that their political preferences were now determined differently than in the past. Before, a political preference was often inherited from parents, and now participants have begun to make their own choices, as many sources of information are available. While LEA-participants merely based their distrust on the political content they find online and their observation that politicians do not keep promises, HEA-participants worried more about the way information was manipulated, since they had studied the mechanisms behind such manipulations. Coping strategies of both groups matched with the way they coped with distrust of institutions and information manipulation (e.g. fake news).

I used to vote PvdA (Dutch social-democratic party) because my father told me so. The first few years I still voted for the party because I didn’t know better. But then, when I started to read more online, I saw they sometimes promise things, but in the end, they fail to comply. – M, HEA, family of 4

In the end, the truth is also ‘determined’ by the number of hits it gets online. That information gets manipulated so easily online, and... this mechanism is being misused, that’s really bad. People can manipulate the media on such a big scale, and ethics are often overlooked. The way political decision-making takes place, like with Trump, is bad. – M, HEA, family of 5

Cultural

Belonging and identity

A few LEA-participants mentioned negative outcomes such as stalking, discrimination, and catfishing. Such negative outcomes brought about grief, distrust, anger, health deterioration, and a decrease in self-confidence.

I’ve got stalkers. They are present offline, but online is a nice extra tool for them. They just strike once again. – F, LEA, family of 4 (single mother)

I have experienced identity fraud on a business level. By falsifying a signature, they performed a payment order in Germany that’s very easy. Nowadays, a bank employee calls me when they see a suspicious transfer, but still it can just happen. – M, HEA, family of 3

It can stay on my mind for a while when I read discriminating comments online. And offline, the people we mingle with don’t say such things. Maybe it is also that I can’t understand that people say such things online. – F, HEA, family of 5

Other *belonging* and *identity* outcomes are related to offensive content that Internet users came across.

Types of offensive content mentioned were personally discriminatory, derogatory of women, and accidental exposure to sexual or violent content. Participants from both groups experienced this type of outcome, but in different ways. In both groups, only a few of the participants experienced one of them on a personal level, such as personal discrimination and harassing messages. Other HEA-participants, who talked of these outcomes, often mentioned that they had only witnessed them online. Notably, they mentioned consequences from just witnessing, such as feeling a general disappointment in humankind or feeling powerless for not being able to explain why this was inappropriate and rude. LEA- and HEA-participants also mentioned other types of offensive content, e.g. video clips of maltreatment or injured victims of car accidents. While participants of both groups often-times felt irritation, disgust, or mental unrest when confronted with this kind of content, HEA-participants said that they were afraid they could not protect their children against such a “mad world” anymore, although they tried. They did so by informing them about potential harm and by applying filters to online services and platforms.

Because of the Internet, we have to inform our children in different ways than before. We are both occupied with IT-related jobs, so that makes it a bit easier. But it remains a problem. – M, HEA, family of 4

I am worried about the way our children should be protected against unwanted content and online bullying in a few years. It just isn't easy to completely stop it, as a parent. There are filters available, but you're not always there, they're often using another device. It is essentially different from when there was no Internet. – F, HEA, family of 4

Animal cruelty, that's what I find horrible. It just appears in my Facebook timeline unsolicited. [...] Reporting it at Facebook doesn't make sense because they don't take action. So, does it make sense to react? To report? I don't think so. – M, LEA, family of 3

In a similar vein, some HEA-participants mentioned another outcome related to *identity* and *belonging* that none of the LEA-participants mentioned – they were increasingly worried about the perfect world being portrayed on social media that does not reflect real life. While a few of these participants indicated that they felt uncertain about themselves, the most prominent consequence was, again, the fear of not being able to protect their children or others. They were afraid of their children feeling the need to

compete in a “fake world” and consequently would never be truly happy with what they do and who they are.

I remember going through Facebook while thinking: everyone has a fantastic life. Even my sister, whom I know is actually not doing well at all. I know I then realized: I'm not taking part in this anymore. I think it's mainly negative for children and for people who don't see that it's fake, that it is only the best version of themselves that people present on social media. – F, HEA, family of 3 (single mother)

I do see danger in the impact of people who paint sort of a perfect world online. And while I know that that's not reality... I do know a lot of people who see it that way and who seriously look up against these 'perfect lives' online and think that is normal. That's really a danger of the Internet, especially for younger generations. – F, HEA, family of 4

Personal

The most *leisure* outcomes in the personal field relate to *wasting time*. About half the respondent from each group noted that they often felt they were wasting time online. They added that with the time they spent online, they could have been doing other more useful tasks. Since this waste of time resulted from voluntary Internet use, some participants wondered if they would call themselves addicted. Only HEA-participants mentioned ways in which they sought to decrease this waste of time by, for example, setting strict time limits for themselves or by installing phone apps that kept track of the time spent online – a combination of a reactive and a preventive strategy.

It is easy to forget the time. [...] I'm also using an app consciously, which shows me how much time I spent on my phone that particular day. I also installed it to become aware of my time online and to diminish it. – M, HEA, family of 2 (couple)

It's just an annoying habit, creeping into your daily routine. Grabbing your phone and scrolling. It's annoying, but still we're doing it. When you're alone in a restaurant, before, you used to start a conversation with a stranger of the waiter, nowadays you're just scrolling the phone. – M, LEA, family of 5 (adult children: moved out)

Preoccupation with the Internet also led them to becoming tired and “not being present in the moment”, as well as becoming highly dependent on certain devices in daily life. Only HEA-participants mentioned these consequences, which they identified as (mental) *health*-related.

The dependency on the device, that's really a negative thing to me. My telephone died and then you're inconvenienced all of a sudden, you can't communicate. Everything is based on this little thing [...]. The ease of it, when it suddenly disappears, wow. – M, HEA, family of 4

You really have to be consciously engaged with: what do I want, what am I looking for. I think that with that, you can take the prevalence of the Internet in daily life in your own hands. But if you just go with the flow, then you will drown, you'll go crazy. – F, HEA, family of 4

Self-actualization

A negative outcome related to *self-actualization* is decreased personal development. A number of HEA-participants said that although the Internet offered many opportunities for personal development, it was also superficial and “easy entertainment.” They noted that the problem was not this type of pastime per se, but the fact that it was predominant and there was less room for other, more educational, or informative activities. As a consequence, there was a decline in skills such as language proficiency, communication skills, the ability to find solutions without consulting Google, and mental arithmetic. Therefore, they had to consciously spend time offline on instructive or relaxing activities instead of spending “useless” time online (a preventive coping strategy). In addition, they feared impoverishment of society as a whole because they worried about others who lacked this critical stance and “tend to get lazy when having access to the Internet.” On the other hand, LEA-participants did not mention a decrease in self-actualization as an outcome of Internet use.

For example, reading, it develops you as a person. I think that if you're online too much, that in a certain moment your vision will become narrower. – M, HEA, family of 2 (single father)

The language proficiency. I love language, but through that stupid internet language... It's horrible when you see how many people just can't distinguish the simple forms. I'm also reading articles about children who can't do the spelling anymore, it's terrible. – F, HEA, family of 4

In relation to *self-actualization*, the majority of respondents in both groups mentioned information overload as a consequence of Internet use. They talked of frustration, mental unrest, and stress resulting from information overload. However, for LEA-participants, information overload was often an obstacle for

accomplishing what they had set out to do, while for HEA-participants, it usually only resulted in a larger time investment for tasks they wanted to and did accomplish. Additionally, LEA-participants often mentioned that they sometimes did not know which type of product or service to choose as a result of information overload. In general, HEA-participants seemed to know better how to tackle such overload because they often had more knowledge of how search engines work. In sum, LEA-participants seemed to perceive information overload as an inevitable part of being online (passive coping), while HEA-participants tried to take action (reactive strategy).

Sometimes, I'm completely overwhelmed. I just learned that I need to specify my search terms on Google, for example. But if you don't do that, then you really get a lot of results. After a certain time, you don't know what to use anymore. – F, LEA, family of 4

If you'd like s to buy a charger and you're typing that in, you'll get a hundred websites. And then I think, 'Which one do I need, for God's sake? Which one is the right one?' – F, LEA, single

We should also protect our children for it, we are already really consciously thinking about it. A child isn't able to frame all the information himself, so if you expose them to all the information, they'll drown. Therefore, they will get permission to go online only from a certain age. – M, HEA, family of 4

Health

Mental stress or anxiety arising from consultation of medical information online is an outcome that less than half of participants in both groups faced. Participants indicated that they sometimes performed searches online that led them to think that they were suffering from a serious disease. However, most of the participants indicated that this feeling of stress or anxiety mostly faded away and, if not, it was often resolved by a visit to the doctor. HEA-participants mentioned, much more frequently than LEA-participants, that the ability to filter and to consult the right reliable sources prevented them from becoming or staying anxious from medical information online.

I do take into account: from which site did I get this and what is true of the information I found? Mostly dokterdokter.nl gives the same information as the doctor. But well, one connects that to kidney problems in the search query and another to cancer. Well, good luck telling those people what's true. – F, HEA, family of 4

Yes, I'm quickly worried when I look up medical info online. I once had an arthritis attack, and so I went

online. Headaches, migraine attacks. I thought: oh no, what if I have a brain tumor? In the end, there was nothing wrong with me. But you can find so many things on the Internet! – F, LEA, family of 2 (single mother)

Other negative outcomes that fall on the personal field are *privacy concerns*. They were mentioned by approximately a quarter of participants from both the LEA- and HEA-groups but originated from different stances. LEA-participants often worried that all kinds of institutions or “websites” were eager for their personal information in order to exploit these data, though they could not specifically put into words which kind of practices or consequences they were afraid of. Their concerns seemed to be a product of a combination of a certain worldview, distrust, and a lack of understanding of online mechanisms. HEA-participants also worried about data security and privacy, but they were often concerned because they had gained knowledge of future developments, such as the Internet of Things and new privacy laws. Sometimes, this knowledge was acquired via an ICT-related job, but oftentimes, it was due to a personal interest in future developments and eagerness to anticipate the developments (preventive strategy).

They know everything about you. And to me, that’s frightening. They also know increasingly more. Because once your name is mentioned and often, I think, ‘I never told you that?’ So that’s alarming, I think. – M, LEA, family of 4 (adult children: moved out)

Sometimes I worry about how it might develop, especially with the Internet of Things. [...] In my work, I do a lot with phishing and malware. The problem is that people who interact with the Internet are increasingly less techie, so to say, and there with less armed against all the trouble that can happen. – M, LEA, family of 2 (couple)

Conclusion

Main findings

In this study, we developed an inventory of negative outcomes of Internet use based on Helsper’s (2012) corresponding fields model. Furthermore, we compared the extent to which LEA- and HEA-participants were negatively affected by Internet use – the type of negative outcomes they were confronted with and how they coped with these outcomes. By applying a qualitative approach, we were able to better understand the differences between the two groups. We found that both LEA and HEA groups confronted the

same *types of negative outcomes* of Internet use, as nearly all sorts of outcomes were mentioned by LEA- and HEA-participants. This suggests that every Internet user is in danger of becoming a victim of, for example, online fraud or exposure to harassing or offensive content. The most important finding of this study is that LEA and HEA groups differ in the way they *cope with* negative outcomes. HEA-participants often attempted to take control themselves when faced with a negative outcome. They did so by looking into the cause, by figuring out how to prevent similar outcomes in the future, or by protecting their children from them. This also applied to anticipating future negative outcomes such as those that may arise from the Internet of Things. In contrast, LEA-participants mostly just experienced an outcome and often did not act on it. In addition, LEA-participants mostly attributed blame to a particular institution or to “the Internet” in general, while HEA-participants often seemed to take a critical look at their own role when facing a certain outcome. HEA-participants mostly applied *reactive* coping strategies but very often also tried to foresee and *prevent* negative outcomes. In contrast, LEA-participants sometimes coped in a reactive way, but mostly saw negative outcomes as a part of Internet use and thus remained *passive*. Prior studies revealed that Internet experience and digital skills are important predictors for the way the Internet is used and the outcomes achieved (Van Deursen & Helsper, 2018). In particular, higher-order skills of creativity and strategic use of the Internet play a key role; these skills are those that people with higher levels of education perform relatively well (Van Deursen & Van Dijk, 2014).

In conclusion, LEA-participants seem to be disadvantaged more by negative outcomes of Internet use compared with HEA-participants, as the types of outcomes they face are similar, but their ways of coping with those outcomes differ. LEA-participants are less devoted to diminishing the impact of negative outcomes by the way that they cope with such outcomes. HEA-participants are better able to compensate for the outcomes they are confronted with by consulting their digital skills and knowledge of Internet mechanisms. LEA-participants, however, continue to bear the brunt of the same negative outcomes. For example, HEA-participants taught themselves to critically weigh their responses and thereby diminish the social pressure on the Internet, but LEA-participants just accepted the negative outcome. In the long run, this tendency might be reinforced by the stance that the two educational groups take – either anticipating

or bearing negative outcomes. These different stances can be linked to Bourdieu's idea of one's *habitus* (Bourdieu 1984; Robinson 2009), the mental structure that people develop as they grow up in a particular social context. The habitus implies embedded dispositions that guide individuals to their own way of acting and thinking. Structural variables such as one's educational background shape – via the habitus – how the Internet is valued, acted upon, and integrated into daily life (Cockerham 2013; van Eijck and Bargeman 2004). Considering educational level in this comprehensive way is desirable, as it will benefit digital inequality research that mostly regards educational level as a standalone, quantitative determinant.

Although negative outcomes are often overlooked in digital inequality research, it actually appears to be a problem area in which inequalities in society manifest in a new way. As van Dijk (2019) sets forth, experiencing negative outcomes mostly implies a reduction of personal, social, economic, or cultural resources. With regard to economic capital, for example, when a person is confronted with financial fraud online, the person's economic resources become reduced. With regard to social capital, for example, Internet users experiencing cyberbullying are likely to lose personal or social resources, such as confidence or informal ties. As some are more disadvantaged by negative outcomes than others, differences in economic and social capitals might therewith lead to social reproduction: Because HEA groups generally have more resources in all domains of society, digital inequalities relating to negative outcomes of Internet use seem to reinforce social inequalities. In terms of policies, more awareness should be raised concerning the specific negative outcomes that Internet users could face, especially among people from lower social strata. Internet users should be taught how to navigate the Internet wisely and what to do in the case of, for example, fraud, scams, or online bullying. Additionally, they should be informed about the impact of placing certain content online or performing specific online activities, where the focus is both on the victim and on the perpetrator. Such education should not be limited to LEA group – everybody should be given this education in primary school.

Limitations and recommendations

In this study, we asked participants prior to the interviews to indicate on a questionnaire which of the listed negative outcomes they had experienced. Furthermore, when families had two family heads,

both were interviewed at the same time. One might argue that participants were guided by the questions asked in a questionnaire or by answers given by other family members. On the other hand, this “guidance” most likely resulted in more complete answers, as participants had already considered the negative outcomes they had experienced before the start of the interview and other family members filled in the gaps. As a result, a more comprehensive list of outcomes could be established. Follow-up studies might use our list of potential negative outcomes as a point of departure.

Our results suggest that nearly all types of negative outcomes are experienced by both HEA and LEA groups. However, as this study did not focus on the frequency of negative outcomes, future studies could take a quantitative approach to studying whether the number of Internet outcomes experienced differs. It could, for example, be expected that the HEA actually faces the outcomes mentioned more often (Blank and Lutz 2018) because, in general, they are online more frequently (Blank & Groselj 2015; van Deursen & van Dijk, 2014). Such a follow-up study could be standardized and used for a survey-based study.

In addition, we recommend that future studies assess the extent to which people are actually disadvantaged by Internet use. In this study, we identified an outcome as “negative” when a participant specifically assessed it as such, but people vary in their assessments: One may perceive the same thing as “more negative” or severe than another. Participants' assessments are also situational. Some participants in this study, for example, indicated that they did experience a certain outcome, but that they did not find it a negative outcome per definition because they were not disadvantaged by it themselves or because they thought it was just part of using the Internet. In addition to *confrontation* and *coping with* negative outcomes, the *assessment of* outcomes could add to the conclusions drawn in this study. It is important to keep in mind that value judgments of outcomes might not only range on a spectrum but also many online activities might lead to both positive and negative outcomes. For example, we found that some participants valued the Internet for its flexibility in getting news during the day, while others loathed it for its power to manipulate (ignorant) people with mechanisms such as fake news. Another recommendation for future research is to consider the multifaceted nature of online engagements, which might also elucidate the subjectivity of outcomes measured.

Finally, in the concluding section, we anticipated how differences in severity and impact of outcomes between the two educational groups could be expected in the long run. For future research, we thus recommend a longitudinal follow-up study with intervals to determine whether the way in which different educational groups cope with negative outcomes has lasting consequences.

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Appendix

Tick the boxes of the negative outcomes that you have experienced at least once or are still experiencing.

- I felt more work pressure through the Internet than I would like
- I felt pressure to respond to online messages of families, friends or acquaintances
- My relationships have become (more) superficial through social media (Whatsapp, Facebook, Instagram, et cetera.)
- I (or my family members) was sent painful or inappropriate messages via the Internet
- Through the Internet I (or my family members) came into contact with wrong people
- I was disadvantaged through online contact with a government agency
- I became a donator or member of an organization/fund via the Internet, which I regretted afterwards
- I bought products online that I actually did not need or I unnecessarily spent money in other ways online
- I lost money by taking part in online gambling or games
- I became a victim of online fraud or scams
- I found information online that made me think I was suffering from a serious disease or illness
- I followed unhealthy advice that I found online
- I became addicted through the Internet
- I spend more time online than I would like to
- The Internet has made me insecure
- The Internet has made me suspicious
- I have less trust in politics/politicians because of the Internet
- I experienced information overload while being online
- I came across offensive content online that I would rather not have seen
- I read inappropriate comments online which were direct to a group that I belong to (f.e. women, migrants, Christians, Muslims, Jews, elderly, et cetera.)