Ungleichheit

Arbeit ist, zumindest von einem an Marx und der kritischen Theorie geschulten Blickwinkel aus, stets mit Entfremdung und Ungleichheit verbunden. Diese sozialkritische Intuition zeichnet sich daher auch in Erforschung digitalisierter Arbeit ab. Ungleichheiten sind selbstverständlich bedeutend vielfältiger als das, was sich in der digitalisierten Arbeitswelt mittelbar ausdrückt. In den sich digitalisierenden Welten, digitalisieren sich die Ungleichheiten, wie Alter, Geschlecht, Herkunft, Milieu und Schicht gleichsam mit; auch gibt es eine ganz eigene digitale Ungleichheit: den ‚digital divide'. Die Digitalisierung fordert von den verschiedenen gesellschaftlichen Subjekten ihren Tribut: Wer über eine große digitale Medienkompetenz verfügt, wer sich in den digitalen Welten auskennt, ihre Regeln und Sprachen beherrscht, wird darin viele kapitale Vorteile finden.

Dabei haben diese Ungleichheiten auch ihre ganz eigenen Kulturen und sind von Ort zu Ort, von Kontext zu Kontext mitunter stark zu unterscheiden. Insofern lässt sich unmittelbar nach den Ungleichheitsstrukturen fragen, was Uwe Matzat in seinem Artikel unternimmt. Diese Asymmetrien in der Medienkompetenz haben wiederum Konsequenzen für Nutzung und Nichtnutzung des Internets und internetbasierter Kommunikation. Welche normativen Gründe und strukturellen Eigenschaften der digitalen Infrastruktur für die Onlinepraktiken der Nutzer*innen von Bedeutung sind, findet Beachtung in Christians Papsdorfs Analyse der Gründe der freiwilligen Nichtnutzung des Internets. Tanja Carstensen schließlich folgt den Spuren geschlechtlicher Ungleichheiten in den digitalen Raum und zeigt, welches synergetische Potential in der Verbindung von digitaler und Geschlechtersoziologie zu finden ist.

Uwe Matzat and Erik van Ingen

Social inequality and the digital transformation of Western society: what can stratification research and digital divide studies learn from each other?

Abstract: We examine what the social change induced by the ubiquitous use of social media and other Internet applications in Western society implies for sociological research on inequality and stratification. Stratification research on the one hand and studies of the digital divide on the other hand used to be quite separated. We provide an overview of research on inequality in the field of social media and other Internet-use research and argue that separation between this and mainstream inequality research is no longer useful. Digital divide research in the 1990 s examined which groups were disadvantaged with respect to access to the Internet. Later attention shifted towards a so-called second order digital divide, focusing on inequalities in the distribution of a diverse set of digital skills as well as inequalities in forms of Internet use. Recently researchers have started to address questions with regard to a third-order digital divide consisting of inequality in *outcomes* of Internet use. This type of research creates a bridge to traditional inequality research, as it focuses on the (real-life) consequences of what individuals do online. Since variation in Internet use leads to inequality of outcomes of Internet use, inequality of life chances is directly addressed by digital divide research. We argue that the ubiquity of use of social media in almost all human domains, and the fact that research has shown that this usage affects socio-economic positions and quality of life, urges inequality researchers to take into account digitalization as an important dimension of inequality. Most important, the shift to a third order digital divide provides the opportunity for both areas of research to focus on outcomes as a point of convergence. Looking ahead, we propose a comparative approach for future sociological research that takes into account findings of stratification and digital divide research.

1. Introduction

The study of social stratification is one of the key topics of sociology, studied since the beginning of the academic discipline. Stratification research is a well-established research field within and outside of sociology, rich in theoretical approaches and empirical insights (e.g., Burzan 2011; Neckerman& Torche 2007). In this article, we examine the question what the rise of social media and other Internet applications implies for the study of inequality and social stratification in Western society. The social change induced by the Internet is a topic in the public debate and has the attention of policy makers. For instance, in Germany – where Internet penetration among households rose to 90% in 2015 (Eurostat 2015) – governmental policy makers have been debating the implications of the digital transformation for

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the labor market (Federal Ministry of Labour and Social Affairs 2015) as well as for citizens' private lives (Maas 2015). In the field of Internet research, scholars have been studying the implications of this societal transformation for social inequality already since the early 1990 s because they realized that this social change does not automatically improve quality of life of all citizens (Kling 2000).

Recently, stratification research has been criticized for neglecting the insights of this research tradition (Robinson et al. 2015). In the early days of digital divide research this neglect was not problematic, because studies mostly focused on what happened online. However, recent developments in the field as well as in reality – where the boundaries between on- and offline are increasingly blurred – make this separation obsolete and counter-productive. The ubiquity of social media and other Internet applications in almost all human life domains affects socioeconomic positions and quality of life, which implies that stratification research can no longer neglect the Internet as an important source of inequality. In this article, we sketch how sociological stratification researchers and digital divide scholars can react to the changes in society and in the field of digital divide research in order to improve the analysis of inequality. We do not aim to provide a comprehensive overview of digital divide or traditional stratification research. Rather, we only sketch the most important questions and insights of digital divide research, so that a reader who is interested in these issues can access the relevant literature easily.

Our article largely follows the chronological development of the field of digital divide research via its three phases. In section 2, we briefly sketch insights of the first phase of research on the digital divide, which focuses on determinants of Internet access. Thereafter, section 3 presents studies of the second phase examining divergent forms of Internet use and inequality in the possession of digital skills. Both aspects are regarded as influential for whether and how citizens profit from the Internet and social media. As we indicate in section 4, recent research in the third phase of digital divide studies shifted its focus to the outcomes of Internet use. This research is of crucial relevance for stratification and inequality researchers. We focus on two areas of outcomes that are important for inequality researchers, namely health outcomes and access to social capital. We have chosen these two phenomena since they are studied by both traditions, affect quality of life, and are characterized by substantial inequality in their societal distribution. We sketch how the two research fields, stratification and digital divide research, approach these phenomena. In a nutshell, our claim is as follows. Traditional health inequality research offers several mechanisms that explain, for instance, the effect of (a higher) education on (better) health outcomes. These mechanisms exclusively refer to processes that are not Internet-mediated. In the meantime, digital divide research explains the same relationship, but includes Internet-mediated communication and online resources as mediating factors. While both fields (of study) cover important aspects, they need to be combined in order to provide a complete explanation of how inequality is produced in an era where many individuals mobilize resources from the Internet.

In addition, this will provide a more comprehensive view for policy makers who aim at addressing problems of inequality. We propose a comparative approach to study how digital modernization affects inequality. We demonstrate how the findings of both research traditions that focus on (e.g., health or social capital) outcomes can be easily combined when explaining the dynamics of inequality, thereby highlighting some potential paths for future sociological research.

2. The beginning: first order digital divide

Since the rise of computer technology, the digital divide has been a topic of debate among researchers and policy makers. In the 1990 s the term (first-order) 'digital divide' was widely used to indicate the gap between citizens who had access and those who had no access to computers and the Internet. In many Western countries, researchers analyzed the conditions that furthered (or hindered) access to these technologies (De Haan 2003; Katz, Rice / Aspden 2001). Both the general public and policy makers were preoccupied with reducing the digital divide at the beginning of the new millennium, and the general belief was that the problem would be solved once everyone had access to the Internet (Mossberger, Tolbert / Stansbury 2003). This belief, caused by the assumption that simple access to computers with an Internet connection automatically leads to more equality of opportunities (DiMaggio, Hargittai, Neuman / Robinson 2001), led to a number of public policy initiatives that aimed at reducing this digital divide (Selwyn 2011). Since access to the Internet in Western societies has been extended enormously after the year 2000, the problem of lack of access gradually became less urgent for policy makers and researchers. Nonetheless, lack of access still constitutes a problem for some groups, such as ethnic minorities, until today (Gonzales 2015).

Much research on the first order digital divide was conducted in the 1990 s and many of these studies had a descriptive character. The findings point to factors well-known to stratification researchers. Although national differences exist, groups that were found to be in a disadvantaged position included the elderly, people with a low income, a low education, ethnic minorities, and, at least in some studies, women and inhabitants of rural areas (Chen & Wellman 2005).

3. The first elaboration: second order digital divide and digital inequality

After the year 2000, many researchers realized that having access to the Internet does neither automatically imply that citizens use it nor that they use it in ways that improve their quality of life (National Telecommunications and Information Administration 2000). Accordingly, the study of the digital divide has shifted from the gap in access towards two other differences, which constitute the so-called second-order digital divide: differences in digital skills and types of Internet use. Some rese-

archers refer to studies of this second-order digital divide as "digital inequality research" (DiMaggio, Hargittai, Celeste / Shafer 2004).

3.1 The first elaboration: second order digital divide and digital inequality

Many (second-order) digital divide researchers are convinced that specific skills are needed in order to make the Internet a useful resource for improving one's quality of life and one's social position in society. The conceptualization of these digital skills has been debated intensively after the year 2000. Bawden (2001) argues that relevant digital skills do not just cover technical competencies ('operational skills'), but in addition an understanding of retrieved information and the ability to distinguish relevant from irrelevant information. Van Dijk (2005) defines digital skills as the "set of skills that users need to operate computers and their networks, to search and select information, and the ability to use them for the fulfillment of one's goals" (ibid: 78). He emphasizes the importance of the ability to utilize the Internet for purposes that affect quality of life. Somewhat later communicative digital skills needed for making and maintaining social contacts and for participation in communities and social network services on the Internet, as wells as skills useful for creating content were added. Several scales have been developed that either rest on summative performance tests conducted in small-scale laboratory studies (van Deursen & van Dijk 2011) or on survey scales used in large-scale field studies (van Deursen & van Dijk 2015). Empirical studies from the UK, Germany, and The Netherlands, indicate that users with a higher education and a higher socioeconomic status tend to have stronger digital skills (Helsper & Eynon 2013; van Deursen & van Dijk 2011; Zillien & Hargittai 2009). Unlike the gap in access to the Internet, it seems unlikely that inequality in skills will disappear in the short run although users can acquire some types of digital skills without following courses (Matzat & Sadowski 2012). Differences in skills between the higher educated versus the middle and lower educated in The Netherlands even increased somewhat in the period from 2010-2013 (van Deursen & van Dijk 2015).

3.2 Capital-enhancing forms of Internet use

Researchers also became interested in finding out what forms of Internet use could be linked to users' quality of life or to social mobility. They made a distinction between forms of Internet use that have the potential to increase the user's financial, human, or social capital ('capital-enhancing forms of Internet use') and forms of Internet use that do not have that potential (Hargittai & Hinnant 2008). Capital-enhancing forms of Internet use include, for instance, the use of social media in order to make new contacts or to maintain and intensify already existing contacts, which likely benefits the social capital of the user involved. Watching music videos and playing single-player games just to kill time would be examples of online activities that are not regarded as capital-enhancing.

Researchers examined how capital-enhancing forms of Internet use are related to users' education and SES. Hargittai and Hinnant (2008), in a study of young adult Internet users in the U.S., analyzed their use of so-called capital-enhancing websites. These are websites that offer health and financial information, national and international news, product information and access to governmental services. The findings demonstrate that higher educated users utilize these websites more intensively. Zillien and Hargittai (2009) studied a German sample of Internet users and found that users with a higher socio-economic status used the Internet more intensively to search for health information, product information, stock prices, political news, and more. Cotten and Gupta (2004) showed for a random sample of U.S. citizens that Internet users with higher education tend to use the Internet more often for searching for health information. Van Deursen, van Dijk, and ten Klooster (2015) showed that among Dutch Internet users diversity in types of Internet use grew from 2010 to 2013 and that especially educational differences in capital-enhancing Internet use became larger. Furthermore, several studies found a strong relationship between digital skills and capital-enhancing engagement on the Internet (e.g., Hargittai & Hinnant 2008; Helsper & Eynon 2013; Zillien & Hargittai 2009). It is remarkable that most of these studies focus on human capital-enhancing forms of Internet use and some findings indicate that education not always predicts differences in all types of *social* capital-enhancing Internet use (Ahn 2011). Nevertheless, these findings have led many researchers to conclude that the Internet contributes to an increase in, or at least a stabilization of, educational and socioeconomic inequality (Zillien & Hargittai 2009).

4. Outcomes of Internet use as third order digital divide and its relevance for stratification research

Studies examining the second-order digital divide show that higher educated users tend to engage more intensively in forms of Internet use that have the *potential* to be advantageous for one's financial, human, or social capital. However, these studies do not answer the question to what extent, if at all, there are educational differences in the *actual* benefits or outcomes of Internet use. Only a few studies have tackled this question (e.g., DiMaggio & Bonikowski 2008) and only recently this knowledge gap has been identified as an important issue (van Deursen & Helsper 2015). Since stratification research studies the same outcomes, as we describe below, the focus on a third order digital divide creates a bridge between both fields and an opportunity for their integration. Helsper (2012) makes a plea for integrative research that relates social exclusion in offline resources to digital exclusion. She distinguishes economic, cultural, social, and personal resources, arguing that researchers need to examine two paths. First, they need to study whether offline exclusion affects digital engagement, thereby producing digital exclusion. Second, they need to study whether digital engagement (or digital exclusion) in turn affects access to offline resources, thereby potentially contributing to an increase in inequality. Take

the following example. Researchers have studied whether offline social integration encourages or discourages online social networking. In addition, they have studied how online social networking affects social integration offline. Depending on the two effects, results may indicate whether 1. the (offline) rich are more engaged online and whether 2. this engagement would increase exclusion (or: inequality) in the offline field. According to Helsper (2012) an increase of inequality would be more likely for effects between corresponding fields like in our example for the social fields offline and digitally. At the same time, Helsper (2012: 418 f) claims that there may be exceptions to this hypothesis about increasing inequality, as the effect of offline inequality on digital inequality would be affected by so-called "social impact moderators". These include, among others, a user's attitudes and digital skills. For instance, a user's positive attitudes about internet use and strong digital skills may compensate for his lack of access to social resources, leading to frequent online networking. Also, the (second) effect of digital engagement on offline inequality would be affected by so-called "digital impact mediators". For instance, more time spent on online networking may not always increase offline social integration as its effects may depend on the quality and sustainability of online interactions which are two digital impact mediators according to Helsper (2012).

The 'corresponding fields model' of Helsper (2012) integrates all three forms of digital divide research (digital access, digital engagement, and outcomes of digital engagement). In addition, the model suggests that the interrelationship between offline inequality and digital engagement is dependent on other specific conditions. We welcome these ideas and agree. At the same time, we argue that for analyzing how digital modernization affects inequality more needs to be taken into account. Stratification research studies many outcomes of digital engagement as well. We argue that only by comparing the findings of stratification research with the findings of digital divide research we can draw conclusions about the consequences of digital modernization on inequality. In the following, we thus sketch the findings of research on two types of outcomes of the use of social media and the Internet that are of particular interest to stratification and inequality researchers as well. These are outcomes related to health and to the user's social capital. Since traditional stratification and digital divide researchers both are interested in these issues, we sketch how both traditions approach them. Thereafter, we sketch a comparative approach for future sociological research that focuses on outcomes as a point of convergence for both types of research.

4.1 Health Behavior & Coping

In stratification research there is a well-established link between socioeconomic status and health (Ross & Wu 1995). Many factors contribute to this association. Here, we focus on two factors that are relevant also in relation to Internet use: health behavior and coping.

Studies show a social gradient in health behaviors or healthy lifestyles, especially with regard to smoking, obesity, and (lack of) exercise (Pampel, Krueger / Denney 2010). The higher educated and those from higher social classes are consistently found to smoke less, have smaller chances of developing overweight and obesity, and to exercise more. Pampel et al. (2010) provide an overview of mechanisms causing these differences in health behaviors. Three of these mechanisms are of relevance for our current purpose. First, lack of knowledge and access to information has been suggested as an explanation for the social gradient in health behavior. Second, efficacy and agency may help explain SES differences in health behavior. The main idea is that the higher educated – due to better problem-solving skills, a more internal locus of control, and greater ability to process information – are better at dealing with difficulties when adopting a healthy lifestyle. In other words, this explanation suggests that "the ability to act on health knowledge rather than the knowledge itself affects health behavior" (ibid. 2010, p. 358). As a result, the higher educated are more likely to search for and to adopt health-related innovations. Third, financial barriers may exist that hinder health behavior. Healthy behavior – such as joining a health club or a weight-loss program, but also buying fresh, healthy food – often requires financial means.

In addition differences arise because individuals deal with their health-related problems in different ways. Harms of negative health events can be reduced by choosing the right coping strategy and by mobilizing social support (Folkman & Moskowitz 2004; Taylor & Stanton 2007) and there is considerable evidence that suggests that those in more privileged socioeconomic positions find more fruitful ways to deal with their health problems in comparison to their less privileged counterparts (Ross & Wu 1995).

In digital divide research several of these topics have been studied, too, and there are ways in which Internet use is connected to health outcomes. These factors include provision of health-related information, availability of coping resources when facing health-related problems, and the use of applications that support healthy lifestyles.

Studies have shown that the Internet is often used as a source of information by individuals who are confronted with physical and mental health problems and that higher educated users tend to utilize the Internet more often for this (human capital-enhancing) purpose (see Chen & Lee 2014, and the literature mentioned in section 3.2). Furthermore, the Internet has been reported to enhance agency. Gundersen (2011) found – in a study of parents whose children suffered from a rare genetic disorder – that after the parents had found useful information online they became increasingly capable of comprehending and managing their situation. Researchers have also reported negative effects of searching for online health information on health – like increased health anxiety and "cyberchondria" (Fergus & Dolan 2014) – but those seem relatively rare.

Moreover, the Internet provides access to coping resources that help deal with health-related problems (van Ingen & Wright 2016). Many studies have looked at online support groups, including those for diabetes patients, individuals suffering from eating disorders, and patients with other diseases, such as cancer or HIV/AIDS (Mo & Coulson 2010). These online support groups provide participants with a number of benefits, including social support and personal empowerment (Uden-Kraan, Drossaert, Taal, Seydel / van de Laar 2009). In a meta-analysis of 28 studies Rains and Young (2009) conclude that participation in online support groups generally enhances well-being and self-efficacy. Recently, it has been shown that use of social networking services adds to perceived social support (Frison & Eggermont 2015). Finally, several studies have looked at how the Internet can be used for health promotion, and how online communities and health apps can boost healthy lifestyles (e.g., Kersten-van Dijk, Westerink, Beute / IJsselsteijn 2017; Napolitano, Hayes, Bennett, Ives / Foster 2012).

As the discussion shows, both research traditions examine the relationship between education and health in specific, but distinct ways. The crucial point is that in the meantime it is impossible to conclude anything about this relationship by only taking into account one of them, and neglecting the other. For instance, van Ingen and Matzat (2018) found – with regard to health inequalities – that the higher educated mobilized more online coping resources after negative life events. At the same time, the educational differences in the mobilization of coping resources online were somewhat smaller than offline so that we can speak of a *reduced continuation* (but not disappearance) of inequalities in coping resources. The example shows that it is not enough to examine the relationship between education and specific health outcomes obtained online. In addition, one needs to *compare* the size of this effect with the corresponding size of the effect of education on specific health outcomes obtained via offline mechanisms. Furthermore, one needs to assess whether on- and offline (health) practices complement or substitute each other.

4.2 Social Capital

Social capital is an important topic in stratification research and analyzed both as cause and consequence of socioeconomic status (Lin 1999). In this section we focus on the latter. Studies indicate that citizens in higher positions of the social hierarchy tend to have more access to social capital. Most of all, those in privileged social positions generally have more extensive, weak tie networks. First, there is an extensive literature that indicates that the likelihood of being engaged in civic associations increases with education, income, and occupational status (van Ingen & van der Meer 2011). And these civic associations are often considered to be a proxy for weak ties (Ruiter & De Graaf 2009). Second, studies have found that those with higher socioeconomic statuses (education, occupation) have more extensive social ties in the occupational hierarchy (van Tubergen & Volker 2015), i.e. the diversity among the occupations of their connections is larger and they are more likely to

have a high-status contact. This implies that those in privileged SES positions have more social capital at their disposal. Third, small-world studies have found that senders with higher socioeconomic statuses tended to forward their packages to others at even higher socioeconomic positions and that their chains were more likely to reach the targets (Lin, Dayton / Greenwald 1978). In other words, they not only seem to possess more extensive networks, but tend to be better capable of mobilizing their contacts.

Social capital is also studied in the Internet-use literature. Scholars became much interested in whether Internet use diminished, expanded, or replaced (different types of) social capital. The findings have been fairly consistent: Internet use increases both bonding and bridging social capital (Ellison, Steinfield / Lampe 2011; Steinfield, Ellison / Lampe 2008). However, some caution is warranted. The concept of social capital used in these studies differs from the concept used in stratification (and other) studies. Where resources are central to the notion of social capital in the latter, the former operationalization is a mix of resources, networks, and attitudes that makes a comparison of findings between these studies difficult. It would help a lot, if digital divide researchers used the established social capital indicators, such as name-, resource-, and position-generators (Appel et al. 2014).

While it is not true that the higher educated acquire all types of social capital online more easily than the lower educated (Ahn 2011) there is evidence that indicates that they are better at expanding their networks in ways that promote their career. Matzat and van Ingen (2016) found that higher educated Internet users in The Netherlands were more likely – compared to lower educated Internet users – to use the Internet to initiate new ties to persons who could offer new jobs, would be willing to write a letter of recommendation, or would otherwise be useful for one's career. They found that the higher educated enhanced their career-relevant social capital more than the lower-educated because they used professional networking sites more frequently. Furthermore, educational differences in career-relevant contacts online and offline were of a similar size so that we can speak of a *stabilization or reproduction* of educational inequality in career-relevant contacts. In addition, there are studies that suggest that other forms of social capital might become distributed more equally because of the Internet. Van Ingen & Wright (2016) found that those with deficiencies in their offline social relations were able to compensate for this online when mobilizing support.

The sketch of the two examples of health outcomes and social capital shows the following. The analysis of inequality (in terms of the distribution of specific resources) is incomplete if it focuses only on offline or online processes. Both types of processes have to be taken into account in a serious scientific analysis. Otherwise, conclusions about a growth or reduction of inequality in society may be very misleading. Also, both types of processes imply different opportunities for policy makers to influence inequality.

4.3 Comparing the outcomes of stratification and digital divide research

The examples in the previous section show that it is premature to draw any conclusions about the impact of (a specific form of) digital modernization on (a specific form of) inequality without simultaneously studying what happens on- and offline. For instance, van Ingen and Matzat (2018) found a positive effect of education on access to online coping resources, but this does not warrant the conclusion that educational inequality (with respect to access to coping resources) increases. Only when we compare the size of the effect of education on access to coping resources online with the size of the effect of education on access to coping resources offline we can draw adequate conclusion. In Figure 1, we display four typical combinations of effects and explain what they mean.

Figure 1: Comparison of outcome effects

A: increasing inequality	B: reproduction of inequality
A: $effect_{online} >> effect_{offline} >> 0$	B: $effect_{online} = effect_{offline} >> 0$
C: $0 << effect_{online} << effect_{offline}$	D: $effect_{online} <= 0 << effect_{offline}$
C: reduced continuation of inequality	**D: reduction of inequality**

We assume that researchers are interested in examining whether an already existing form of inequality, e.g. a positive effect of education (X) on access to coping resources (Y), is increased, stabilized or reduced through digital media. Since earlier stratification research documented the existing inequality we can safely assume that the offline effect is larger than zero. As Figure 1 shows in cell A, if the positive effect of education on access to online coping resources is (significantly) larger than the positive effect of education on access to coping resources offline ($effect_{online} >> effect_{offline}$) then we can speak of increasing inequality. If both effects have the same size (cell B) then we can speak of a reproduction or stabilization of existing inequality. If the online effect is smaller than the corresponding effect offline, but both are positive ($0 << effect_{online} << effect_{offline}$) then we can speak of persisting but reduced inequality (cell C). Finally, should the effect that is mediated by digital media be zero (or even be negative) then we can speak of a (strong) reduction of inequality (cell D). Obviously, the comparative approach can be extended to all kinds of inequality analyses, such as inequality with respect to gender, income, ethnic background, SES, and other characteristics of interest. The crucial point is that we need to take into account the findings of both research traditions and compare them before we

can draw conclusions about the impact of digital modernization on inequality. It should also be noted that the extent to which inequality changes (in scenarios other than Fig. 1: B) is dependent on whether online practices replace offline practices. The changes will be larger when the substitution is larger.

5. Looking ahead: sociological research on inequality and the digital modernization of society

The Internet induces a digital transformation of Western society that is intensively debated in public policy and highly relevant for the labor market, societal stratification, and quality of life. Since the 1990 s digital divide researchers have studied the impact of digital transformation on social inequality. However, until now this research has been separated from conventional stratification research. In this article, we explained why the separation was reasonable in the past but counterproductive for future research. We proposed a *combined-comparative approach* for future research.

During the first two phases of digital divide studies, researchers strongly focused on online phenomena. Only recently, they began to focus on outcomes of online engagement as phenomena that cross the online-offline dichotomy and affect citizens' quality of life and social status. Therewith digital divide researchers and social stratification researchers have begun to study similar outcomes – such as health inequality, unequal access to social capital, and income inequality – but from two complementary perspectives. Leaving out one of these two perspectives leaves us with an incomplete analysis and can sometimes lead to misleading conclusions about changes in inequality. Continuing with the conventional separation of the two research fields is thus highly undesirable for researchers in both fields and for policy makers who would like to get a complete overview of the consequences of the rise of the Internet (and in particular social media) regarding inequality and who would like to get more insight into the opportunities for a modernization of society.

In addition, future research needs to integrate insights from the stratification and digital divide literature. Take health as an example. Several researchers have found a link between socioeconomic status (especially education) and health-enhancing Internet use. However, it is not enough to study the effects of, for instance, education on Internet use which, in turn, affects health outcomes. In addition, researchers need to combine online and offline mediated effects and compare them. Only then we can conclude whether digital modernization of society leads to either a) increasing inequality, b) a reproduction of existing inequality, c) a continuation of inequality in a reduced intensity, or d) to a reduction of inequality.

We have highlighted only two areas of research (health and social capital) where stratification and digital divide research could learn from such a *combined-comparative approach with a focus on outcomes*. This is due to the space restrictions of this paper and due to the fact that these areas are among the best developed fields in the

literature. However, there are several other topics that would profit from an integrated approach. For instance, DiMaggio and Bonikowski (2008) concluded that the Internet may play a role in (intragenerational) social mobility, supported by their finding that there was a positive relation between Internet use and income growth in the U.S. Also, research on online dating has suggested that racial and educational homophily play a major role in mate selection on the Internet, and possibly even a larger role than in offline mate selection (Lin & Lundquist 2013; Skopek, Schulz / Blossfeld 2011).

The ubiquity of social media and the Internet in almost all aspects of life that affect socio-economic positions and quality of life urges inequality researcher to take into account the digital transformation of Western society, but it also urges digital divide researchers to consider in more detail the findings of traditional inequality research. As we proposed, an approach that *compares offline and online* mediated outcomes would be a useful step for studying the impact of digital modernization on existing social inequality in a more nuanced way. The proposed idea is simple, but sometimes the simple things in life need more attention.

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