
25. How (not) to deepen information inequality via information policy: a contribution of the contextual approach¹

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The first political documents and proclamations focusing on the issue of the digital divide were heavily informed by the notion of a society divided into ‘information haves’ and ‘information have-nots’ (see, e.g., NTIA 1995). Subsequent research on the digital divide quickly veered away from this oversimplified, binary perspective based exclusively on access to information and started probing into the determinants and dimensions of access. Nevertheless, the notion that internet access somehow guarantees exclusive access to the information necessary for participating in society has become one of the primary tenets of digital divide research. The claim that having access to information is a ‘necessity for survival’ (van Dijk 2005, p. 136) in today’s society is closely connected with the theoretical framework based on the assertion that we live in a new type of society—the information society—in which not being connected is tantamount to being left behind and disadvantaged (Castells 2001, van Dijk 2005, Webster 2006). Political interventions aimed at addressing the problem of the digital divide have been operating within this conceptual framework, focused first on bringing every individual in and maximizing the number of proficient users later; these have been enacted via supply-side oriented measures, like expanding the share of internet users, promoting increased digital literacy, implementing e-government, supplying schools with computers and internet connections and so on (Helsper & van Deursen 2015). The political problem of informed citizens was cast aside, relegated instead to the problem of access to and mastering of technology.

After 25 years’ worth of efforts in trying to bridge the digital divide by these means, the policies focused on promoting (efficient) internet use seem to be ineffective in terms of delivering the promised results. The remaining share of non-users has plateaued in the most digitized countries and data on non-users and weak users have not revealed an overwhelming need on their part to plug in (Eurostat 2020, USC Annenberg School Center for the Digital Future 2012, 2016). The substantial differences among users in terms of their ability to use the internet seem to be a long-standing issue, with a significant segment of users remaining in the low-skills category and no evidence of the gap being closed in terms of information digital skills (van Deursen & van Dijk 2015, van Dijk & van Deursen 2014). Furthermore, the developments in social cohesion, political polarization and the quality of public discourse do not entirely meet the expectations used to justify the government-supported expansion of the internet.

Are these developments temporary deviations from the course of information(al) development that can be remedied by even more digitization? This appears to be the logical conclusion drawn by the prevailing approach of the information society theory (Castells 2001), though empirical findings do not substantiate such a response (Lupač 2018). The problem is that we cannot simply reject this premise solely because the existing reading of the digital divide is

based on a positive assessment of internet use and a (hypo)thesis that internet access is, unconditionally, a unique and stand-alone source of social inequality (see Scheerder et al. 2017, van Dijk 2005). If we want to advance our understanding of the digital divide, then we must question this premise and reframe the digital divide in a manner which allows us to outline the conditions which render internet use a (new) source of social disadvantage and dependency.

One promising way forward lies in acknowledging that digital divide research did not interact much with other research traditions which engage with the same or largely overlapping issues. This oversight has been elucidated, for example, by Liangzhi Yu (2006), who articulates how information inequality, as elaborated in Information and Library Science (LIS), remains neglected in digital divide research, and by Petr Lupač (2018), in the failure of digital divide research to draw on the diffusion of innovations theory. This is why the explicit treatment of the information inequality issue as such is relatively rare in digital divide research and is also why including other research traditions which address the issue can open the door to a more fruitful understanding of the topic (Yu 2011).

In the following sections of this chapter, I shall conduct a critical analysis of some of the misleading assumptions that proliferate in research and policies addressing the digital divide. This analysis will also shed light on how digital divide research can benefit from interacting with research centred on information inequality. I will also demonstrate how existing pressures to increasingly informatize society may have paradoxically helped to form the digital divide. This means that these assumptions should be avoided by information policies if we are to mitigate the trend that the advanced command of certain technologies will become an inevitable prerequisite of respectable social existence. My critical reworking of the subject will utilize relevant sections from a previous effort (Lupač 2018), which focuses on the need to transcend the existing conceptual framework which dominates the tangled web of digital divide research, information society theory and information policy. The concluding section will present an alternative, contextual approach and its implications for information policy in terms of two newly identified determinants of the digital divide: the embeddedness of the internet in a social context and the cost-outcome ratio of using alternative information sources when compared to the internet.

25.1 THE INFORMATION POOR ARE NOT WHAT THEY SEEM: UTILIZING RESEARCH ON THE KNOWLEDGE GAP AND OUTCOMES OF INTERNET USE

The discourses of LIS and digital divide research overlap in terms of understanding the information poor as those unable to access and meaningfully use information *online*, something which serves as a critical determinant of living in today's society (see Haider & Bawden 2006, Marcella & Chowdhury 2020). In this overlap, information poverty does not only extend to non-users but also to the segment of internet users lacking digital literacy (or digital skills) or those who exhibit inadequate internet use in terms of information seeking. As the issue of non-users will be the subject of the following section, let us now take a closer look at how users who meet this definition of the 'information poor' are conceptualized.

A fixed and absolute definition which clearly demarcates what qualifies as information poverty would be problematic and LIS authors make no attempt at approximating one either, citing the relative nature of deprivation and the context-specific assessment of what can or

cannot be considered relevant information for the informationally marginalized or excluded group being studied (Duff 2015, Yu 2011). In digital divide research, Jan van Dijk (2006) identifies ‘the excluded’ as a burgeoning segment of the population in even the most technologically advanced societies. The information elites, on the other hand, are characterized by ‘high levels of education and income, the best jobs and societal positions, and a nearly 100 percent access to ICTs [information and communication technologies]’ (van Dijk 2006, pp. 185–6).

According to van Dijk, this growing disparity between the excluded and the elite is reflected in the finding that unequal access is gradually becoming a form of structural inequality. The primary driving force behind this is the rich-get-richer mechanism, whereby users with high social status (measured using educational attainment) perform ‘capital-enhancing activities’ (reading the news, e-banking, job searching etc.) more frequently than their counterparts. This perspective on the deepening differences between user practices which purportedly influence life chances is labelled the ‘growing usage gap’ by van Dijk (2005). I make such detailed reference to van Dijk’s theory of the growing usage gap here because it synthesizes previous research findings into a theory which explicitly formulates its empirical footing. Furthermore, his theoretical grounding and use of evidence corroborates the logic employed by many of the digital divide authors who also focus closely on the link between knowledgeability-related online practices and social status (e.g., Bonfadelli 2002, Robinson et al. 2003, Wei & Hindman 2011). This theory can thus also be used to aid our critical reflection on the key problematic assumptions which digital divide research employs when positing internet usage as the path towards producing more informed individuals.

In this regard, the information poor refers to people with low status who do not possess the information necessary for participating in society, as they waste their time on simple and entertainment-based activities and do not engage in capital-enhancing activities. As activities of the latter variety are purported, as their name suggests, to have a positive impact on the user’s social status, internet use helps people with higher social standing to maintain or improve their status, while people with low social standing do not fully utilize the potential of ICTs and thus miss out as a result. This scheme corresponds to the prevailing understanding of the digital divide as a new source of social inequality, the problematization of which could have promising implications when reconsidering the digital divide issue. Let us now examine how existing evidence problematizes such claims.

The first part of the argumentation presupposes that socioeconomic status is a decisive determinant of the type of online activities being performed by the user. The theoretical reference employed in this context is the knowledge gap hypothesis published originally in 1970:

as the infusion of mass media information into a social system increases, segments of the population with higher socioeconomic status tend to acquire this information at a faster rate than the lower status segments, so that the gap in knowledge between these segments tends to increase rather than decrease. (Tichenor et al. 1970, pp. 159–60)

Unfortunately, digital divide research did not pursue this any further, failing to draw on subsequent knowledge gap research. Since the mid-1970s, the list of factors that influence the knowledge gap has expanded to include: the type of information and its relevance to local issues (more pronounced knowledge gaps have been observed for federal, global and professional issues while low to non-existent gaps have been reported in terms of local conflicts), active participation in the respective field (such as politics) and the structure of the popula-

tion's communication network (Donohue et al. 1975, Gaziano 2017). The ambiguous and often contradictory results were to a large extent remedied using the inclusion of interest and/or motivation, tested using the difference model and later in combination with socioeconomic status (SES) in the contingency model (Bonfadelli 2002, Kwak 1999).

If we take a look at studies that test the knowledge gap hypothesis in an online environment and consider the factors of interest and motivation, the findings very rarely corroborate the first part of the argumentation mentioned above (e.g., Bonfadelli 2005). The vast majority of these studies agree that interest and motivation exhibit a stronger or at least comparable effect, with socioeconomic status exhibiting a secondary or non-existent impact (Dobransky & Hargittai 2012, Fraile 2010, Ho 2012, Shim 2008). Furthermore, Markus Prior (2005) posits that the internet, as a part of the high-choice media environment, increases—at least in the case of political learning—the role of interest and motivation at the expense of educational attainment. However, this would mean that if the second part of the argument were at least partially valid, the vicious circle of the rich-get-richer hypothesis would no longer be generally applicable and the internet would cease to be a new channel of upward social mobility. The issue that then arises regarding the determinants of information poverty is ascertaining what determines low interest or motivation and how exactly (certain types of) internet use affect a user's motivation to seek information (and become informed) in that particular area (Tran 2013).

The second part of the argumentation presupposes the positive impact of capital-enhancing activities on socioeconomic status; an inverse or non-existent effect is then assumed for entertainment or recreational activities—gaming, chatting, browsing sites of personal interest and so on (van Deursen et al. 2015, Zillien & Hargittai 2009). This presumed causality is problematic from several different angles and in order to assess its validity we need to re-examine the following issues: the added value of internet use when pitted against other sources of information, the quality of the online activity being performed, the idea that certain online activities have a clear, generally applicable causal impact on a user's social status and the omission of online communication activities in such assessments.

The first empirical studies aimed at confirming the knowledge gap hypothesis focused primarily on the print medium, a typical example of a status-differentiated medium, which means that the scope and quality of information is higher in publications that are consumed by people with higher social status and vice versa. Whether or not the validity of this hypothesis extends to other media has long remained uncertain, as studies using the example of television to verify this effect have yielded contradictory results and the impact of interpersonal communication has not yet been sufficiently mapped out on an empirical level to be confronted with and generalized alongside other findings on the subject (Gaziano 2017, Kwak 1999). Some of the findings regarding this inconclusive relationship and tenuous differences have led researchers to use the parameters identified in mass media information campaigns which promised to close the knowledge gap. The first studies on this topic thus unanimously revealed that one type of mass media in particular proved capable of reaching the largest cross-section of status groups in the population, thereby exposing them to the very same information—during the time of these studies, this referred primarily to nationwide television broadcasting (Gaziano 2017).

Where then does the internet fit in by this logic? The answer is not a straightforward one, as the impact of the internet is reflected both through the user directly via his/her use of the internet as a source of information and indirectly via the internet as an infrastructure which shapes and is shaped by the transformation of mass media systems and political polarization (Hindman 2009). The discussion on the evolution of mass media from the 1970s onwards

has been peppered with talk of the fragmentation of the public, purportedly spurred by the growing number of media outlets associated with narrowcasting and the increasing amount of information consumed in the context of social media, where filter bubbles and echo chambers are said to play a significant role. The relevant empirical evidence, however, shows that it is not fragmentation that is at play here but rather audience duplication and overlapping as well as an enduring homogeneous agenda (Fletcher & Nielsen 2017, Lee 2007).

Furthermore, the claim that social media users are only exposed to information and people who share their own worldview appears rather exaggerated (Dutton et al. 2019). This is affirmed by the findings presented in Hai Tran (2013), which posit that the impact of the internet on political knowledge after controlling for other variables, is, unlike traditional media, non-existent. The study thus verified a previous series of findings claiming that 'traditional news media remain the most important source of political information' (Tran 2013, p. 845). A similar conclusion, that is, that online seeking does not generate increased knowledge across any status group, was drawn by Minsun Shim (2008) in a study on knowledge about cancer-related issues. What this study did reveal, however, was that the internet does play a perceptible role in the knowledge gap once users home in on a topic that does not receive extensive coverage in mass media.

Secondly, the alleged association between the performance of certain online activities and socioeconomic status cannot be considered an adequate contribution to the argument due to the erroneous operationalization of internet use as a guaranteed means of knowledge attainment. The 'classic' approach to measuring the knowledge gap tests the user's familiarity with facts as an indicator of the respondent's knowledge. In the context of the crisis of trust in the social institutions that generate and disseminate information (science and the news), the user's knowledge must be assessed in tandem with his/her identification with the facts being sourced in order to differentiate between knowledge and beliefs (Hindman 2009). In digital divide research, however, the dependent variable employed is usually that of (the frequency of) certain online activities performed by the user (see Bonfadelli 2002, Robinson et al. 2003, van Dijk 2005). This completely eclipses the question of how well the user absorbs the information from the given activity. If the respondent answers by saying, for example, he/she watches local news videos online, this cannot be used as an indicator of his/her knowledgeability of local events, as we do not have information regarding the respondent's ability to process and utilize this information. It is thus more fruitful to analyse digital skills in terms of how the user searches for, processes and uses information for his/her personal benefit.

In the context of information inequality, a decisive factor in terms of digital skills seems to be the user's ability to use the internet for his/her personal gain, defined by van Dijk (2005) as strategic digital skills. This is followed by other determinants which have an important albeit secondary impact on social status, such as the user's information skills concerning his/her ability to search for, select, compare, combine, generalize and critically assess information as well as medium-related skills, which refers to the user's command of the technical and formal aspects of the digital interface being used. Identifying how internet use affects an individual's knowledgeability as well as the distribution of skills for obtaining and strategically using information online in order to improve one's quality of life or social standing has surprisingly sparked the interest of digital divide research only recently (van Deursen & van Dijk 2014). It is important to note then that digital divide research and information policies have been operating without solid empirical evidence to bolster the fundamental claim championed by

these lines of discourse, that is, that (efficient) internet use produces benefits (in this case, knowledgeability) which are necessary for participation in today's society.

Evidence garnered by a unique online survey focused on the association between skills, uses and outcomes of internet use, however, significantly problematizes the prevailing wisdom reflected in the second part of the argument in four respects. Firstly, the strongest association between uses and outcomes was always restricted to the given domain (economic, social, cultural, personal), which means that 'those who achieve outcomes in one domain do not necessarily achieve outcomes in another domain' and thus that 'we cannot assume that closing the digital divide in one area automatically transfers to less digital inequality in another area' (van Deursen et al. 2017, p. 468). The marked distinction between beneficial and non-beneficial activities, in relation to social mobility being informed by knowledgeability, is further problematized by the finding that while 'promising' economic activities only predict economic outcomes, personal and social uses, which are characterized as 'non-beneficial', predict outcomes across various domains and thus are likely to have a broad, collateral impact on the benefits of internet use (van Deursen & Helsper 2018). What is more, the analysis conducted for personal and social outcomes revealed only a very weak impact of socio-demographics compared to skills and uses, which Alexander van Deursen and Ellen Helsper (2018) interpret as follows: 'what people do online and the skills they have are more important than who they are when it comes to inequalities in outcomes of Internet use' (van Deursen & Helsper 2018, p. 2344).

Another independent issue is the observed differences between different types of outcomes, such as those related to social status and life satisfaction (van Deursen et al. 2017). Finally, such an understanding of social uses overlooks an entire category of online communication activities (email use, SNS, discussion forums, chatting and the like), which comprises the most widespread and frequent type of internet use, the content of which can be far-ranging in terms of its potential for improving knowledgeability, social status or personal development.

What do these findings reveal? It is clear that we should do away with the notion that, on the basis of a simple mechanism, the internet only reinforces the one-dimensional understanding of (information) inequality that preceded its expansion. The presented findings allow for three generalizations to be made, though they should be subjected to further empirical and theoretical scrutiny.

Firstly, for the segments of the population characterized by their specific interests and motivations, the internet serves as a gateway towards higher knowledgeability and thus, depending on the context, also towards higher social status or life satisfaction. Knowledgeability, however, must be understood in broad terms here in relation to the wide range of individual interests, the benefits of which can exceed the economic understanding of status, that is, not as a narrow, top-down defined area of knowledge pertaining to economics, politics or science (replacing the term social status with symbolic capital thus might be a more adequate way of framing the internet's impact in terms of knowledgeability). In a certain way, this can also be understood as the fulfilled promise of the internet as a harbinger of increased freedom.

Secondly, although the internet can be considered a knowledge leveller (in terms of general knowledge) in domains that score high on mass media agendas, this finding is problematized by the vast array of topics that do not receive much or any media coverage. This creates substantial knowledge and belief gaps in the online environment which are defined by a specific sort of 'knowledgeability' precisely due to the specific interests and motivations exhibited by users. Just as there is evidently not only one digital divide governed by a singular, universal formula but rather several domain-specific digital divides, information poverty also proves

to be a differentiated, domain- and topic-specific phenomenon. While this may seem to only complicate the situation further, in terms of information policy vis-à-vis information inequality, this can prove beneficial in that it establishes the need for information policies to take on a honed focus on specific, clearly defined facets of information inequality (e.g., health, economic, civic, environmental etc.), instead of being limited to supporting expediently selected online functions and activities (e-banking, e-government etc.).

Thirdly, the prevailing impact of mass media on knowledgeability and the problem of downplaying online communication reveals that, in terms of digital divide research, excessive focus on the internet as such typically leads to an exaggeration of the role that the internet plays in information inequality and thus eclipses the question of information inequality in the context of countless other information sources.

25.2 THE INTERNET HAS NOT BECOME THE ONLY INFORMATION SOURCE

One of the main lines of criticism regarding claims championing the revolutionary role of ICTs lies in the need to specify the technology in question (Webster 2006). Digital divide research only addresses this issue tangentially within its theoretical framework and the empirical evidence attesting to the role of ICTs comprises data on the proliferation and use of the internet without further addressing the implications of this reduction. Once differences in connection speed and stability are considered, whether observed at an international level, in the context of central vs. peripheral areas or across different social strata, a far more dramatic picture of the digital divide is revealed (Hilbert 2016, Pick & Sarkar 2015, van Dijk 2005). Users who fall into the information poor category are then constantly confronted with problems posed by technology maintenance, that is, the low quality and high failure rate of the device being used, social circles less competent in the ability to solve technical difficulties and connection outages often associated with pay-as-you-go services (Eynon & Geniets 2016, Gonzales 2014). Due to their constant oscillation between being users and non-users, it would then be more fruitful to categorize these people as belonging to a fluid category of individuals with specific needs who seek to minimize the negative aspects of technology maintenance; such reframing would thus more effectively target information policies (Gonzales 2016).

However, what is more important in this regard is the omission of a significant communication technology which spread faster than the internet and which was adopted by a larger portion of the population, particularly in developing nations: the mobile phone. According to John Horrigan (2008), this device became the most indispensable communication technology in the United States in 2007. The striking absence of the mobile phone in digital divide research—with the exception of digital divide research on developing countries—can be explained by the absence of the mobile phone in the information society theory coupled with the internet craze of the 1990s, which coincided with the proliferation of the mobile phone. Which distinctive features render the mobile phone in particular—not smartphones—a source of information? In economically developed countries, SMS-based information services were relatively short-lived, though text messaging is still sometimes used for marketing purposes or in urgent cases, such as catastrophes or epidemics, where mobile services are put to use as a quick, population-wide and cost-effective solution. In developing countries, however, the information potential of this technology has developed extensively for everyday use, such

as for providing information on the weather, prices or polling services (Castells et al. 2007, Rheingold 2008).

The primary benefit of the mobile phone, however, clearly lies in the ability to exchange information with members of one's social network while on the move, thus allowing users to coordinate, plan and obtain information in an unprecedented manner (Geser 2005, Rainie & Wellman 2012). In terms of information poverty, the mobile phone can provide additional added value to users in low-income urban communities, characterized by poorer health and higher crime, due to the technology's ability to immediately connect users with their family members, friends or medical professionals, as observed by Amy Gonzales (2014).

However, social networks are not only beneficial for users in terms of identity, emotional stability, security and social life: the most fruitful tradition of social network analysis posits social networks as an integral part of society's communication structure, determining the direction of information flows, that is, which information an individual has at his/her disposal due to the individual's position in the social network and which he/she conversely lacks. The logical question that follows then is what leads a user to choose a certain communication channel, that is, when does the user opt for face-to-face contact and when do phone calls, text messages or emails become the communication medium of choice? Lupač (2018, p. 135) points out that due to the increased attention on smartphones, there is a paucity of studies which would allow any generalized conclusions to be made, though available evidence does reveal that 'the ultimate decision to use either a mobile phone or the internet is heavily influenced by the geographic distance between the user and communication partner, the complexity of the information being communicated, the nature of the relationship, culture and the perceived cost of using an alternative communication channel'.

If we consider this in an even broader context and pit the informational benefit against that of 'traditional' information sources, such as television, radio and newspapers, then, as has already been mentioned, such media seem to be the most important source of political information. International comparisons of the general informational significance that information sources pose for respondents reveal a long-term trend of increasing significance exhibited by the internet. However, in some of the most informatized countries such as Switzerland and Sweden, the significance of television is comparable to that of the internet. Furthermore, television serves as the most important source of information, in addition to interpersonal sources, for non-users (USC Annenberg School Center for the Digital Future 2012, 2016).

It is thus evident that using an analysis of internet use and its outcomes in order to assess knowledgeability may lead to the misleading illusion that the internet bears a significant influence on how informed its users are. When assessing information inequality, it should thus not be overlooked that the internet is rather one specific information source of many and that, moreover, it is highly interconnected with these other sources—a conclusion that is well in line with previous findings about the supplementary role of the internet in the domains of social life and economy (Lupač 2018, Rainie & Wellman 2012). It is thus not true that the internet has entirely ousted these 'traditional' sources and become the only source of information, a prevailing belief that has given rise to the similarly misleading claim that internet use is a universal prerequisite in terms of keeping individuals informed in all domains that affect social participation (see van Dijk 2005). Special attention must also be paid to the notion of people as isolated entities, an issue which we came across during the discussion of online communication activities being overlooked in digital divide research and here in the case of information sources as well.

25.3 PEOPLE ARE NOT SOCIALLY ISOLATED ENTITIES

One of the biggest and most persisting problems of the social sciences is that they are often influenced by the optics through which the subject being studied is painted by the type of data being used. In terms of digital divide research, the data obtained via quantitative surveys bring about the tendency to individualize the sources and solutions to problems, that is, the tendency to view individuals as socially isolated statistical units and not as entities characterized by their position in a certain social network or structure. The same tendency has already been identified in the prevailing quantitatively oriented approach adopted by Barry Wellman and Stephen Berkowitz (1988) in their statistical analysis and in the diffusion of innovations theory, where Everett Rogers (2003) defines this phenomenon as the ‘individual-blame bias’. This tendency permeates digital divide research and its treatment of all major topics, which is why overcoming this methodological weakness serves as a promising light at the end of the tunnel for the future of information inequality research as well.

The diffusion of innovations theory operates with two primary channels through which an innovation spreads, though the deciding channel for most studied innovations is the adoption of the innovation via direct, face-to-face contact. Rogers (1986) confirmed the decisive impact of interpersonal communication on the proliferation of the personal computer among the US population in the 1980s. This line of thinking then continued with the development of the diffusion of innovations theory (e.g., Brown 2008). Nevertheless, these findings have scarcely been reflected in digital divide research, which instead has clung to basic socio-demographic indicators as predictors of adoption rates.

In the domain of skills and outcomes, the impact of a user’s social network has already been evidenced in the aforementioned collateral impact of social use on outcomes as well as in studies focusing on social support, that is, enlisting contacts in one’s social network in order to problem-solve, which, in the case of technical problems, means compensating for insufficient digital skills (Stewart 2007). Findings on the role of family members and support networks in the adoption and use of the internet are, nevertheless, downplayed using the social homophily argument, which posits that users with low social status and poor skills often turn to informal support which is presumed to possess equally inadequate digital skills (Courtois & Verdegem 2016, Eynon & Geniets 2016, Helsper & van Deursen 2017). Given the fact that using communication to problem-solve means obtaining information that reduces an individual’s uncertainty, that is, information that increases knowledgeability, let us examine which objections can be raised against such argumentation.

Firstly, this argument erroneously assumes that the problems being solved are of the same nature across users with different social status. It is thus possible that the use of informal contacts presents a different type of added value for users with low social status considering the nature of their user practices, which would be well in line with the positive assessment of social support in qualitative studies. However, this would also need to be corroborated on a quantitative level. Secondly, this type of support does not only refer to technical and skill-related assistance but also to informational and emotional support, which can have a direct and positive impact on outcomes of internet use, as evidenced by the relatively extensive database of literature focused on online social support for users with health-related problems (Algtewi et al. 2015, Coulson et al. 2007). This would also support the findings presented by Cédric Courtois and Pieter Verdegem (2016, p. 1523) which suggest that ‘the usage of social support sources moderates the direct and indirect association between inequality sources (i.e., access quality,

skills and motivation) and the diversity in positive outcomes'. Thirdly, Christian Fieseler et al. (2014), using the example of unemployed individuals, demonstrate the positive impact of online social support on job-search self-efficacy and behaviour, which is also a crucial finding in terms of the above-cited question probing into which factors produce sustained interest and motivation. Fourthly, the social homophily argument presupposes a largely homogeneous social network for users with lower social status, though such a claim may not be generally applicable and is deserving of further research.

If information from more experienced users could be 'transferred' to less experienced users, does it then also hold true that there could be a 'transfer' of benefits from internet users to non-users? Affirmative responses can be found on both a macro and micro level. Robert Jensen (2007) coined the term 'digital provide' in his already classic analysis which examines the impact of mobile phone diffusion on the fisheries sector in the South Indian state of Kerala. The study revealed that fishermen with mobile phones were better informed, thus improving how local markets operated, which in turn generated positive economic effects which also benefitted (though not as significantly) fishermen who were not mobile phone users. Nevertheless, similar analyses focusing on structural effects are very rare and are predominantly limited to developing countries.

On a micro level, there is a greater wealth of empirical information revealing that both users and non-users relatively often use their social networks to obtain information, process requests and so on (Dutton et al. 2013, Helsper & van Deursen 2017, Lupač et al. 2015). This form of proxy use (or use via intermediaries) is particularly significant in developing countries, which are often characterized by shared ICTs, and largely problematizes the individualistic international comparisons of mobile telephone and internet use (James 2011). The question of whether or not a non-user is truly unconnected and falls into the category of the information poor is thus contingent upon the individual's degree of social isolation and the quality of his/her social network. The goal of information policy should thus coincide with social policy, as in order for it to be effective, it should aid in bolstering social cohesion and inclusion, with an added emphasis on enhancing social capital.

25.4 A CONTEXTUAL APPROACH TO INFORMATION INEQUALITY AS A WAY FORWARD

The aforementioned problematization of the arguments characteristic of digital divide research vis-à-vis information inequality paves the way for several fundamental lines of inquiry: how can mass media and interpersonal communication, which evidently still play a significant role in terms of information inequality, be incorporated into digital divide theory? What are the conditions which render the internet a truly essential source of information? What are the contextual determinants through which unequal internet access translates into information inequality?

In order to propose answers to these questions, we shall draw on the contextual approach to the digital divide as proposed by Lupač (2018). This perspective calls attention to two particular parameters that determine the indispensability of internet use: the embeddedness of the internet in a social context and the cost-outcome ratio of using alternative information sources when compared to the internet.

The term ‘indispensability’ in connection with internet use was elaborated by Donna Hoffman et al. (2004) in response to the deepening integration of the internet in everyday life. When such integration happens on a large scale, it gradually transforms the manner in which certain activities are carried out, that is, social institutions. The informatization of institutions increases the benefits of internet use and simultaneously makes individuals dependent on the said internet use. However, when retaining the other assumptions of digital divide research, this concept does not allow for an alternative, non-fatalistic understanding of the digital divide. The specific use of the term indispensability here, in comparison with how it operates according to Hoffman et al., lies in the added emphasis on the degree to which an environment is informatized, regardless of ICT adoption or the level of integration exhibited by the studied actor. Informatization is not an automatic, universal and homogeneous process—it occurs as the product of social choices, and at a different speed and manner depending on the domain, institution or type of knowledge. At an individual level, the factors of motivation (including the routinization of online activities), accessibility, relevant digital skills and the quality of equipment continue to play an independent role in dictating the severity of the digital divide. Such factors, however, are ‘merely’ one side of the issue and their overall impact on the severity of the digital divide in a certain context is predicated upon the indispensability of internet use in terms of users not being able to obtain the necessary information in any other manner. The relevance of this issue is contingent upon the two aforementioned parameters which determine the severity of the digital divide.

The embeddedness of the internet in a social context does not only extend to social institutions but also to other relevant levels of context, such as the level of social networks (determining the possibility of social support and proxy use), level of social organizations (in the case of information inequality, those providing information, such as mass media and libraries) and the level of societal values and norms (e.g., internet use being integrated into common sense). Contexts that exhibit a lower level of internet embeddedness are linked to lower levels of internet indispensability as there is far less external pressure to use ICTs, which can be evidenced, for example, by empirical findings on the lower perceived necessity of internet use among older generations and segments of the population with lower educational attainment (Lupač et al. 2015), findings gleaned from non-users suggesting the lower share of users in their social environments (Lupač et al. 2015), findings on the influential impact of external pressure on acquiring a computer for late adopters (Brown & Venkatesh 2003), as well as findings on the demonstrable impact that computer skills and use have on re-employment in the managerial and professional world, that is, for positions with significantly stronger ICT integration (Peng 2017). The increasing significance of the internet as a source of information can then be ascribed both to the rising integration of online information-seeking in everyday life as well as the rising importance of social media as a site for consuming and interpreting the news (Shearer & Matsa 2018).

Nevertheless, the permeation of the internet in social practices does not automatically increase its indispensability (nor information inequality for that matter), provided that alternative information sources are available for which the cost-outcome ratio is subjectively more advantageous or comparable to that of the internet. This is well in line with the findings presented above, positing that the extent to which internet use influences information inequality throughout the population is contingent upon the coverage of the said information in mass media. Information inequality is thus not primarily a problem of internet access or quality of internet use, but rather a problem of information availability being reduced to certain commu-

nication channels or bubbles (in terms of communication-divided networks). A pupil whose household does not have internet access, for example, is not necessarily at a disadvantage if the pupil is not required to submit homework online or if he/she has the option to conduct assignments offline. The absence of internet access may become a source of disadvantage once the situation changes (e.g., if schools are forced to close, resulting in remote learning via the internet as the only option).

This may also apply in the case of e-government, the implementation of which can lead to other communication and information options (e.g., face-to-face or telephone communication) being shut down, restricted or inconvenient to use as a result of cost-cutting measures or changes in bureaucratic practices. Efforts to tackle information inequality, purportedly induced by the proliferation of the internet, that push for even more internet use can paradoxically exacerbate this inequality if such efforts culminate in the internet becoming the exclusive information infrastructure.

This paradox thus indicates that the digital divide will be most perceptible in the domains of life in which internet use has become an absolute necessity and not in contexts where the internet is merely an analogous addition to other communication channels or information sources. This suggests that—drawing on findings on proxy use, net evaders and technology maintenance—the ‘I don’t need it’ argument put forth by non-users and users who assess their digital skills to be sufficient can be interpreted as rational reactions to the specific situations of such people. However, this also means that the digital divide is here to stay as an integral aspect of the segments of society characterized as the ‘information society’, that is, sociotechnical configurations which exhibit a heightened indispensability of internet use. The digital divide is thus not a temporary deviation but rather an inherent aspect of our informatized social reality—we must then learn to live with this reality and focus on preventing and minimizing the effects of the fervent belief that the future of communication and information lies exclusively in the online world.

What general recommendations can be drawn from this analysis vis-à-vis information policy (in relation to information inequality)? The problematic underpinnings of digital divide research as highlighted above, that is, conflating information access and the ownership of a certain device or higher level of digital skills, promoting single-channel solutions and eclipsing context-specific practices and skills, all increase the risk of internet use becoming even more indispensable, thereby stoking information inequality in the respective population. Considering the unparalleled proliferation of the mobile phone as a user-friendly device, it is certainly worth rethinking its use value as an alternative communication channel and source of information, especially in terms of information that can unanimously be regarded as essential in a social or civil context, what Alistair Duff (2015) has called ‘normal democratic information’ (NoDI).

In light of the relatively low acquisition costs and the government-supported digitization of information sources, the idea of a government-sanctioned, low-cost solution for phone plans presents itself here. Government organizations in particular should pay more attention to the types of information campaigns being promoted in the current mediascape. The existence of non-users and the relatively high share of the population with low digital skills calls for a more honed focus on providing tailored support of proxy use, formal social support and assistance to those who struggle with technology maintenance. Libraries, government bodies and community-based solutions, as already reflected in the field of community informatics (e.g., Yu 2011), can play a significant role here, though these topics are equally relevant for the

information policies implemented by non-governmental organizations (those in the education sector, organizations focused on the production and distribution of goods, healthcare and so on).

NOTE

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