JYX JYVÄSKYLÄN YLIOPISTO UNIVERSITY OF JYVÄSKYLÄ

This is a self-archived version of an original article. This version may differ from the original in pagination and typographic details.

Author(s): Tenhunen, Sirpa

Title: Digital Inequality and Relatedness in India after Access

Year: 2023

Version: Accepted version (Final draft)

Copyright: © 2023 Taylor & Francis

Rights: In Copyright

Rights url: http://rightsstatements.org/page/InC/1.0/?language=en

Please cite the original version:

Tenhunen, S. (2023). Digital Inequality and Relatedness in India after Access. In E. Costa, P. G. Lange, N. Haynes, & J. Sinanan (Eds.), The Routledge Companion to Media Anthropology (pp. 343-354). Routledge. https://doi.org/10.4324/9781003175605-34

24

Digital inequality and relatedness in India after access

Sirpa Tenhunen

https://orcid.org/0000-0002-8661-8762

Abstract

The scholarship on digital inequality and divides has relied mainly on quantitative data and such general criteria for digital inequality as access, motivation, skills, and the autonomy of use to measure the empowering effects of internet access. This chapter develops a novel way to understand digital inequality based on ethnographic fieldwork on smartphone use in rural and urban India among low-income and little-educated people. It analyses digital inequality through the concept of digital relatedness exploring how people's digital media use is embedded in social relationships and how media use serves to refashion relationships and hierarchies. The chapter argues that the focus on autonomous uses can leave unacknowledged a great variety of digital practices, which users can find valuable and even transformative. It also demonstrates how even seemingly autonomous media use is embedded in social relationships in the sense that people usually learn their uses from others.

The digital divide concept emerged in the 1990s to refer to the unequal access and usage of digital technologies. The idea is well summarized by Castells (2002: 269), who argued that being disconnected from the internet is tantamount to marginalization in the global, networked system. In this chapter, I will first discuss how the approaches to digital divides and inequality have evolved as access to digital media has increased. Drawing from my ethnographic fieldwork[i] on smartphone use in rural and urban India among low-income and little-educated people, I then propose a novel way to understand digital inequality through the concept of digital relatedness. I demonstrate that understanding digital inequality requires exploring how people's digital media use is embedded in social relationships and how media use serves to refashion relationships and hierarchies. To conclude, I discuss the implications of the relational understanding of new media use for digital inclusion.

Whereas the lion's share of the research on the appropriation of new media has tended to focus on the early adopters, the notion of the digital divide directed attention to the people excluded from digitalization. Hence, the notion helped build a critical stance towards the ideas about digital media as bringing about development and prosperity for all (Gunkel, 2003). Early debates on digital divides tended to assume that information and communication technologies (ICTs) are inherently good and progressive, that the non-use is solely caused by a lack of access, and that providing ICT resources for socially disempowered groups is a means to empower them (Green and Haddon, 2009). The critiques of the concept, which first emerged at

the beginning of the 21st century, found the notion technologically deterministic and crude in emphasizing access to media and dividing people into information have and have-nots (Carpentier, 2003; Gunkel, 2003; van Dijk, 2006). Yet, much of the academic, policy, and popular discourse around ICTs has continued to centre on this notion, while policies worldwide seek to bridge the divide or enable a digital leap.

Inequalities after access

Identifying the conceptual flaws of the digital divide notion has not been accompanied by the disappearance of digital inequality. Stark differences in people's abilities to access digital data persist not only between countries but also within countries. The global access rate to the internet has increased from nearly 17 per cent in 2005 to over 53 per cent in 2019; yet, only 19 per cent of individuals in the least developed countries had access to the internet in 2019, while 97 per cent of the population was able to go online in developed countries (International Telecommunication Union, 2019). Even high-quality and low-price access to the internet does not necessarily translate into an equal capacity to use it. In Europe, half of the less-educated and the elderly do not use the internet regularly, and about 58 million EU citizens (aged 16–74 years old) have never used it at all (Negreiro, 2015). The digitalization of governmental and private sector services worldwide has helped those tech-savvy enough to access these services, but it has increased digital inequality for others. The Covid-19 pandemic has exacerbated the situation further as an increasing number of

activities, which used to take place face-to-face, have been transferred to the digital sphere (Lai and Widmar, 2020). Children without access to distant learning have borne the brunt of digital inequality—two-thirds of the world's school-age children have no internet access at home (United Nations Children's Fund and International Telecommunication Union, 2020).

Mobile broadband subscriptions exceeded the number of fixed connections in 2008, and much of this growth now occurs in developing countries (World Bank, 2012: 11–30). While the coverage gap— those living outside of areas covered by mobile broadband networks—has narrowed to 7 per cent of the world population, the usage gap—the difference between total potential use and actual usage—has grown faster than usage (Bahia and Delaporte, 2020). Like much of the developing world, India witnessed unprecedented growth in teledensity from less than one per 100 persons to 93.27 during 1991–2018 (Telecom Statistics of India, 2019). Mobile internet use increased in India particularly after the service provider company Jio launched an affordable smartphone along with a free internet trial offer in 2016. Other service providers responded by introducing rate cuts; as a result, India's data usage quadrupled in one year. By 2018, when I returned to India for fieldwork, India was one of the largest and fastest-growing markets for digital consumers, with 560 million internet subscribers, second only to China (BBC, 2019). Yet, the usage gap of mobile internet in South Asia was highest among the continents—61 per cent of the population who live in regions covered by mobile internet did not use it in 2020

(International Telecommunication Union, 2020). Affordability has remained a pivotal barrier to connectivity, especially in lower-income countries and among low-income people in countries worldwide; consequently, around half of the world population was offline in 2020 (International Telecommunication Union, 2020).

Those connected to the internet through smartphones do not get the same affordances as those using a broadband connection through a computer, as Donner's (2015) research in South Africa and India demonstrates. In addition to reading on a small screen, it is hard to use smartphones to author internet content, which is one of the vital internet affordances compared to printed text. Furthermore, the same properties responsible for mobile telephony's rapid growth in developing countries, such as usage-based pricing, present significant constraints to effective internet use. When every click on the internet costs money, users are likely to conserve airtime and their data bundle balance carefully—families have to decide how to allocate and balance bytes to different uses such as Facebook versus work. Hence, instead of unlimited surfing and browsing the internet, the hundreds of millions of new internet users are, in Donner's (2015: 124–125) words, likely to use it briefly and occasionally. They "dip and sip," conserving airtime and the balance on their data bundles (2015: 135).

Similar to Donner, media anthropologists (for instance, Archambault, 2017; Burrel, 2012; Costa, 2016; Hobbis, 2020; Horst and Miller, 2006; Tenhunen, 2018; Ventkatraman, 2017) have challenged universalizing claims about the impact of

digital technologies. They have revealed the diversity in people's new media use and demonstrated that many users have to use new media sparingly due to the high cost of connections. However, although media anthropologists have provided rich data on digital inequality as well as insights into the new media use as a social practice, they have seldom explicitly addressed the debate on digital divides and inequality. Drawing from media anthropology, I aim to develop a nuanced understanding of digital inequality by exploring technologies and social relatedness based on my ethnographic fieldwork in rural and urban India. I have carried out fieldwork in Janta, a multi-caste village in the eastern state of West Bengal with 2,441 inhabitants (Census of India, 2011) since 1999. In 2012–2013, I observed how people moved from simple handsets to smartphones (Tenhunen, 2018). In 2018, I carried out fieldwork among environmental refugees in Kolkata, a mega-city in Eastern India. I also visited a few of these Kolkata residents' villages in the coastal region of Sundarban, which they had left due to the extreme weather events.

Understanding gradations of use

As digital technology has become increasingly ubiquitous, the discussion on the divides has moved from access to contextualizing the usage of technology (Tsatsou, 2011: 319). For access to matter, people must find the use of ICTs socially and culturally meaningful; they must fulfil people's needs, desires, skills, and capacities to make a difference in how and whether they access technologies (Loader, 1998;

Mansell and Steinmueller, 2000: 37). In addition to access to technological means, divides can exist in terms of the autonomy of use, use patterns, social support networks, and skills (DiMaggio and Hargittai, 2001). The "digital divide" is now commonly understood as consisting of three levels: the first one refers to the inequality in access, the second one to skills and use,[ii] and the third one[iii] to the unequal outcomes and benefits of digital media use (Van Dijk, 2020). Since even when the divides are understood as multiple, the term reinforces splitting people into haves and have-nots, the notion of the digital divide is more usefully described as digital inequality to reflect the gradations of use. The scholarly interest, in turn, has shifted from divides to approaches that consider the relationship between social and digital inequality (Helsper, 2012 and 2021).

The concept of intersectionality has offered a fruitful way to address the social complexity of the appropriation of new media. The term coined by legal scholar Kimberlé Crenshaw (1989: 139) refers to how mutually reinforcing vectors of race, gender, class, and sexuality constitute subjectivity. Crenshaw availed the concept to make the law more sensitive to different registers of identity—she developed her insights by drawing from legal cases involving African American women's arguments that they were facing compound discrimination. The concept has since been used in many contexts across disciplines to highlight how focusing on one aspect of identity, such as gender or class as apart, does not do justice to social complexity. Wallis (2015) applied the concept to media studies exploring how multiple axes of identity

and modes of power among migrant women in China relate to mobile phone use. She argued that social constructions of gender, class, age, and place produce particular engagements with mobile technologies, which reproduce and restructure these identities. By demonstrating that migrants' social identity as migrants and not as Beijing people remained intact, despite the virtual mobility and inclusion in expanded and enriched social networks that phones offered, Wallis emphasized social barriers of media use. Yet, smartphone-mediated encounters can facilitate users' agency. For instance, McCaffrey and Taha (2019) challenged assumptions of refugee incompetence by demonstrating how Syrian migrants in the US harnessed such smartphone interfaces as Google Translate and YouTube videos to negotiate linguistic and cultural differences and lower the interpersonal language barriers.

In this chapter, I introduce the term digital relatedness to pay attention not only to the barriers of media use but also how the use of digital media is embedded in human and non-human relationships and networks, which are inherently open and emergent. Relatedness is a term coined by Carsten (2000) to refer to the processual nature of kinship relationships produced through social interaction and the exchange of substances. Kinship studies have focused mainly on how substances as bodily fluids are understood to constitute kinship relationships. Carsten's ethnographic research in Malaysia and Scotland broadened the understanding of substances from bodily fluids to small acts of everyday life, which could create kinship where it did not previously exist. By digital relatedness, I refer to how media use is not only

embedded in pre-existing social relationships as revealed by the intersectionality approach but how it can serve to refashion the meanings of social relationships and hierarchies. Consequently, the term relatedness helps to highlight the potential emergence of new relationships, identities as well as concomitant novel media ideologies. I will start by describing how my interlocutors used their smartphones, including the barriers they faced in using the phones. I then demonstrate how people were able to develop novel digital practices. Next, I explore how people refashioned their relationships and local hierarchies through their smartphone use. I provide ethnographic vignettes from my fieldwork during 2012–2013 and 2018, in order to analyse how the new availability of inexpensive branded phones contributed to digital practices and inequality.

The diversity of digital practices after access

When I arrived in the village of Janta in 2012, one of the first things I was told was that the lowest caste group,[iv] the Bagdis, had acquired fancy phones. The news surprised me since Bagdis had been among the last people in the village to purchase phones. The fancy phones turned out to be Chinese-made phones with smartphone facilities: a music player, camera, the internet, video camera and player, radio, double-sim facility, and a memory chip. These multiple-facility Chinese phones were offered at much lower prices—the cheapest cost Rs 700 (around 10 euros)—than even the simplest branded phones. Nevertheless, mere smartphone ownership did not mean

that people accessed the internet or were even interested in doing so. Most phone owners used even the calling function of their phones sparingly. Wealthier people could make and receive tens of calls a day, whereas low-income families only receive and make a few brief calls weekly. The importance of education for phone use was highlighted when I observed a 12-year-old Bagdi girl effortlessly learning to browse English language information from the internet using a smartphone. At the same time, the older, less-educated generation in the same family needed help to type in a number. Yet, an inability to read English numbers and text does not exclude anyone from calling because phones are shared, and younger family members could help their elders use the phone's calling function. I witnessed both young men and women acting as phone use experts in their families.

The few people in the village who had used their phones to browse the internet all had a college education and therefore belonged to a minority. In 2013, I found 33 villagers (1.3 per cent of the village population) who either had a college degree or were studying at a college. The few, who had tried the internet had found many uses for it: downloading music and movies, finding out about prices, products, jobs, and exam results, as well as sending e-mail and accessing study sources such as literature and dictionaries, and using Facebook. In 2013, browsing the internet directly on a mobile phone cost Rs 98 per month for a limited amount of gigabytes, which low-income people found too expensive. Service providers had also introduced inexpensive data plans (starting from Rs 12), allowing the internet to be browsed for a

limited period and amount of data, which could mean just one night. Consequently, people tended to access the internet by means of their phones only sporadically. Moreover, browsing the internet on an inexpensive, low-end handset was not easy—these phones were not user-friendly. I, for instance, failed to teach a young woman who had studied up to class 10 (first year of high school) to access the internet and use e-mail on her mobile phone. I, too, found it difficult to operate the low-end phone model to access the internet. But it must have been more challenging for someone who had never browsed the internet with the help of a computer even to grasp the idea of the internet when accessed on a small phone screen.

Most people who possessed cheap smartphones, however, had accessed the internet but not directly with their phones. Instead, they bought music, videos, and pictures, which are downloaded on their phone's memory chips at a village shop. Although this practice differs crucially from the more autonomous use of smartphones to browse the internet, it offers easy and inexpensive access to internet content. The amount of downloaded material depended on the size of the memory chip, but the usually downloaded package contained hundreds of songs, dozens of pictures, and a few films. Each download cost Rs 10–30, and the cost of memory chips was around Rs 150–350. Villagers found these costs more affordable than buying a monthly or daily internet package.

In 2018, my interlocutors in a squatter settlement in Kolkata used their smartphones much the same way as the villagers I encountered in 2012–2013 despite

the new availability of inexpensive branded phones and data plans. Some people had continued to use old simple handsets because they were not comfortable using the touchscreen phones, while others had bought branded smartphones. For most people, the phone's calling function continued to be more valuable than internet-based applications. The families were dispersed into several units in different locations, and phones helped them stay in touch. Moreover, phones' calling functions were crucial for their livelihoods. Most men's work was tied to construction projects—they were hired to carry out a specific part of the project, and once it was over, phones helped them to find a new job. Other urban opportunities for men included small-scale business or working as a ricksha or car driver for which phones' calling functions were also necessary. Women, who mainly found employment as domestic workers, said that without owning a phone one could not get a job, as employers want to stay in constant touch with their employees by calling them.

I met persons who possessed Jio phones and were aware of the three-month free internet offer; yet, they had not availed themselves of the offer. Like villagers in 2013, most people indirectly accessed the internet by purchasing music and films on their phone's memory chip from the nearby shops. The difference was that the urban shops charged more and offered their customers more possibilities to select the content[v] than the village shops in 2013. The two college-educated residents of the Kolkata neighbourhood possessed a good understanding of the various ways one can use the internet—both had learned how to use a smartphone's internet applications

from their teachers and peers at the college. However, only one of these persons owned a smartphone and could practice what he had learned. He had used the smartphone for his studies by accessing information about exams. He also mentioned using WhatsApp, Facebook, and Google maps. He was the only person I met in this community who had used internet banking applications. The Indian state's Digital India campaign, which has among other things sought to develop digital financial services in 2017 (Ministry of Electronics & Information Technology, Government of India, 2019) had not reached this community. They preferred to send money to their families through a trusted person who could travel and deliver the cash in person. Some people mentioned having used other people's bank accounts to send money.

The rest of the internet users I met in this urban neighbourhood were either young or middle-aged people whose sons or daughters could help them use the smartphone. The smartphone users with little education could access the internet, but their range of use was much narrower than that of the above-mentioned college-educated man. Popular ways to use the internet over smartphones included watching films on YouTube and series on television channels, which were provided on their phones. Most people used the phone for recreation, but some people also mentioned watching educational videos on YouTube. For instance, a young woman had learned cooking and hairstyling from YouTube videos. Some people also made video calls or exchanged videos of their daily lives. Children played games and watched cartoons on smartphones.

The branded phones and cheaper data connections had made using the internet easier: consequently, the range of use had diversified. Nevertheless, accessing the internet still required social learning. My findings are similar to many ethnographic studies, which have revealed how people who lack skills and abilities are often helped to use digital media. Bakardjieva (2005), who studied computer use at homes in the United States, coined the term "warm expert" to refer to nonprofessional persons who help inexperienced users come to terms with digital devices. The crucial role that warm experts play in the appropriation of new media means that inclusion in the digital world takes place through social interaction. For instance, Oreglia (2014) discovered how older women in rural China had learned the basics of mobile phone and computer use. These women pursued their goals of maintaining relationships and accessing online entertainment after receiving training from their children, through collaboration and knowledge sharing with their peers, and through frequent reliance on other people to perform specific actions. In contrast, exclusion from digital services can result from the scarcity of social contacts or networks lacking people with digital skills. However, the social appropriation of new media is not only about passing technological know-how on how to use the device. People also have to learn to use different media in socially appropriate ways. Gershon (2010) argues that people devise the proper ways to use a specific medium together—she calls the process an idiom of practice. Gershon maintains that the medium shapes the message because people have media ideologies that shape how they think about and use different

media, while media ideologies about one medium are always affected by the media ideologies people have about other media. The notions of media ideology and warm expert help us to understand how digital media use tends to be firmly embedded in pre-existing social relationships. As such, even when people use digital technologies seemingly autonomously, the use remains predominantly social in that people need to learn to use smartphones and applications from other users. Hence, in addition to missing access, differential use of digital media emerges from patterns of social interaction.

Refashioning of social hierarchies

The social relationships in which the media use is embedded are not static but emergent, and media use can contribute to the changes in social hierarchies. Next, I turn to explore how my interlocutors refashioned and reconstructed hierarchies through their smartphone use—in both research locations, smartphones played a role in how people navigated within social hierarchies, even refashioning them. The low caste, Bagdi neighbourhood was the last one in the village to receive electricity; therefore, unlike the upper castes and classes in the village, they had not previously owned televisions. Consequently, smartphones had allowed the Bagdi neighbourhood to leapfrog a whole range of gadgets—cameras, music players, and televisions—which most of the world has acquired one after another as separate technologies over many decades. Although the Bagdis did not buy branded phones, their smartphones

were identity statements, signifying their position's relative improvement in relation to the upper land-owning castes in the village. Smartphones represented the Bagdis' new inclusion in services and consumer products from which they had previously been excluded. This exclusion, in turn, had contributed to their social standing in neo-liberal India, where media images have delineated the urban middle classes as the consumers of not just the newly available commodities but also of the new India produced through the meanings of these commodities (Fernandes, 2000). The widespread ideology, according to which not being connected is a sign of exclusion from global currents and development, has also contributed to how owning digital technology has become a significant symbolic act through which people can seek to improve their position and challenge hierarchies. Throughout India and South Asia, it has become common for elites to demonstrate social and economic changes through anecdotes of how someone's driver, cook, or maid has suddenly acquired a mobile phone (Nisbett, 2007). Nisbett (ibid.), who repeatedly heard the story from the IT elites in Bangalore, notes that the comment entails a dual discourse—the pride that these working-class people could have acquired something so symbolic of hi-tech India, mixed with the uneasiness about how the lower classes have suddenly managed to catch up in a hi-tech sphere considered the preserve of the elite. When I told my upper-caste friends in the nearby town of Vishnupur about the popularity of smartphones among the Bagdis, they commented that common people's use of phones as entertainment centres entails the misuse of phones, which should be used for

making calls. The low castes' and classes' use of mobile phones for entertainment stirred controversy because their new ability to possess such advanced technological gadgets was experienced as disruptive of local hierarchies—a Bagdi caste person owning a smartphone challenged the upper caste views of lower castes as backward. By labelling low caste people's smartphone use as misuse, the upper-class people sought to downplay the potential rise in the hierarchy that the possession of smartphones could signify.

The Kolkata community, where I did fieldwork in 2018, was an informal squatter settlement characterized by more social fluidity and diversity than the village. Most of the residents of this community had left their villages in the coastal region of Sundarban (South 24 Parganas district) after the cyclone Aila, which caused large-scale destruction in the area in 2009. For some, displacement had meant social decline and poverty; yet, for others, the chance to move to the city and engage in paid labour had made it possible to save money and move upward. The neighbourhood looked shabby with its houses made of mud, bamboo sticks, and plastic sheets; yet, the interiors of the homes were usually neatly furnished and included such expensive items as flatscreen television and branded smartphones. Even the few wealthy people of this community did not have many incentives to improve their houses because they could be evicted any day. The city had zoned the area as a park, but it could not evict the people until it could rehouse them. Residents had built their houses and lived there without paying rent by bribing the local police and the party office.

As mentioned before, people of this community found phones useful for coordinating family relationships and work, but smartphones were also used to navigate the social fluidity in families whose members had drifted apart socially. For instance, a woman, who worked as a maid had arranged her daughter's marriage to a well-to-do family. Her interaction with her daughter and the in-laws was now limited because visiting her informal neighbourhood would have disturbed the upper-class status of the daughter's in-laws. Mother and daughter were, therefore, able to see each other only seldomly, but they exchanged videos of each other and especially the daughter's children over their branded smartphones. Another couple kept in contact with their sons by calling them, despite the rift with their sons' families. The parents had converted from Hinduism to Pentecostal Christianism; thus, their sons' wives forced them to move out of their own house. They relocated to the informal settlement and did not visit their sons' families; however, they could stay in touch with their sons over the phone despite the social rift. The possibility that phones offer staying in touch despite social ruptures contributes to the changes in how social hierarchies are experienced and understood.

Digital recreation as social change

In both locations and research periods, the internet was used directly or indirectly for recreation. The digital divide debate has overlooked the use of digital media for pastime and amusement since these uses have not been considered as offering

potential for users' agency. However, far from passive time-pass, recreational activities, too, involved social negotiations about family relationships and the line between the spheres of everyday life in terms of who watches which contents in which social contexts. The use of smartphones for entertainment challenges ideas about phone users as rational individuals in search of useful information with the help of ICTs, although entertainment is not entirely devoid of information. Television viewers in India, for instance, use soap operas to gain new knowledge on phenomena such as urban lifestyles and alternative family types (Johnson, 2001; Munshi, 2012). Rangaswamy and Cutrell (2012), who have observed that low-income youths in urban India used phones for recreation just as the villagers of Janta did, suggest that these entertainment practices have the potential to lead to new skills and abilities being discovered by offering a space to experiment with technology. They also argue that the use of smartphones to access entertainment can have a valuable social effect of binding people and creating an informal technology hub.

Both accessing and sharing music and films directly from the internet are fluid activities because one has great freedom to choose when to watch and listen and with whom to share the content. Even phone memory chips offered this kind of freedom. Most people find the way they can now reshape the line between work and leisure exciting and energizing. Whereas television and cinema hall audiences have to follow the program schedules, a person possessing a smartphone can select the time and the company they wish to share the content of their phone's memory chip Hence, leisure

activities can be constructed as more relational than before. A young woman, for instance, said that the smartphone allows her to watch serials while her husband watches films on the television. On the one hand, smartphones enabled household members to make their own choices on what to watch, and, on the other hand, parents found it easy to control how children used the shared family smartphone. For example, parents of a young girl preferred the smartphone to television because the daughter could only watch cartoons when her father was at home with his smartphone—had they owned a television, it would have been more difficult to keep her from watching television and neglecting her homework. However, for adult family members, smartphone ownership increased their opportunities to make individual choices over what to watch. Most families lived in one-room-houses and owned one television set, which meant that they had to agree to watch the same programs, whereas people could make individual choices about what they watched on smartphones. Women prefer to watch soap operas since they are designed for female audiences—they depict strong female characters and address topical issues from women's perspectives. The leisure practices enabled by smartphones, hence, can help transform gendered kinship relations by giving women access to a greater variety of programs than they could access by watching television. Watching films and serials on smartphones offers a new freedom of choice and social experiences both in rural and urban India, similarly to Hobbis's (2020) description of the role of movie watching on smartphones for kinship relations in Melanesia.

Conclusions

Attention to digital relatedness helps understand how media use is embedded in social hierarchies and their meanings, revealing how digital inequality emerges and how social hierarchies are transformed. The slashing of the prices of branded phones and internet access has diversified smartphone use among the people I observed in India in 2018. The branded phones have enabled such online activities as filming and sending video clips as well as watching television and films much better than the cheap semi smartphones used in 2013 did. Most young people who owned smartphones had acquired these skills, helping the older generation of their households master them. However, in 2018, it was still rare to find people using a greater variety of internet affordances—possibilities for action offered by internet—such as textual contents of the internet, payment, banking, and navigation applications, or even WhatsApp. Only those people who had a college education and a network extended to tech-savvy people could become skilled in using a variety of internet services. For them, smartphones opened up a wealth of useful information and data from which they could reap practical and even professional benefits through their access to educational contents. Hence, digital practices corresponded largely with social relatedness. The ability to use the many affordances offered by the internet was rare as it required higher education and interaction with people who already possessed these skills. Consequently, smartphone use has strengthened pre-existing

rifts between the more and less educated people. At the same time, the calling functions of the phones continued to be more significant for most low-income people's livelihoods and support networks compared to the textual information offered by the internet. The internet hardly offers useful contacts for people who seek work in the informal economy. Moreover, informal sector workers' social security was largely based on family and kinship; hence, the ability to call was more crucial in times of crisis than searching for useful information from the internet. However, as I have demonstrated, people who are seemingly digitally marginalized can develop unexpected ways to use digital technologies and refashion their relationships. Although these practices do not translate into drastic improvements or changes, for instance in economic power relationships, over time, these small changes can lead to epochal changes.

The workaround practices to tackle the high cost of internet access and lack of internet skills, such as buying content on memory chips, enable novel recreational practices. However, these novel practices by no means diminish the value of the ability to use the internet for a wide range of essential purposes, for instance economic transactions or remote learning. The pre-existing scholarship on digital inequality and divides has relied mainly on quantitative data and such general criteria for digital inequality as access, motivation, skills, and the autonomy of use to measure the empowering effects of internet access. However, even seemingly autonomous media use is embedded in social relationships in the sense that people learned how to

use services from others. Moreover, the focus on autonomous use can leave unacknowledged a great variety of digital practices, which users can find valuable and even transformative. The third-level digital divide—for example unequal outcomes and benefits of digital media use—is often understood through tangible benefits such as economic and political empowerment, although users increasingly avail of digital media for recreation, which can play a part in social and cultural change in multiple ways.

The central policy goal in India and elsewhere has been to tackle digital inequality by providing affordable access. Despite the slashing of internet prices, low-income people still tend to find mobile internet too expensive, which largely explains the wide usage gap in South Asia. My study demonstrates that although the high cost is the main barrier for internet use among low-income people, even affordable access may not translate into a broad range of internet uses. Being able to avail multiple affordances of the internet tends to require a higher-than-average level of education. In turn, this hinders the successful use of the internet for increasing equal opportunities in learning, which is one of the goals of the Digital India program (Ministry of Electronics & Information Technology, Government of India, 2019). Moreover, learning to use the internet to access useful information and services requires developing social networks that extend across social boundaries to those who are already practising these internet skills. My research exemplifies how digital inequality is influenced by both rigid social hierarchies and insufficient attention to

the role of social interaction for digital inclusion. Instead of access to digital services promoting learning and social mobility, higher educational level and social mobility tend to promote digital inclusion. Highlighting the importance of digital relatedness brings the complexity of digital use, relationships, and power into focus.

References

Archambault, J. (2017) *Mobile secrets: Youth, intimacy, and the politics of pretence in Mozambique*. Chicago: Chicago University Press.

Attewell, P. (2001) "Comment: The first and second digital divides," *Sociology of Education* 74 (3): 252–9.

Burrell, J. (2012) *Invisible users: Youth in the internet cafés of urban Ghana*. Cambridge: MIT Press.

Bahia, K. and Delaporte, A. (2020) *The State of Mobile Internet Connectivity 2020*. GSM Association. www.gsma.com/r/wp-content/uploads/2020/09/GSMA-State-of-Mobile-Internet-Connectivity-Report-2020.pdf. (Accessed 30 June 2021.)

Bakardjieva, M. (2005) *Internet society: The internet in everyday life*. London: Sage.

BBC "Mobile data: Why India has the world's cheapest," available at https://www.bbc.com/news/world-asia-india-47537201, (accessed February 16, 2021).

Carpentier, N. (2003) "Bridging cultural and digital divides: Signifying everyday life, cultural diversity, and participation in the online community Video Nation," *EMTEL Conference New Media and Everyday Life in Europe*, 1–37.

Carsten, J. (2000) *Cultures of relatedness: New approaches to the study of kinship*. Cambridge: Cambridge University Press.

Castells, M. (2002) *The internet galaxy: Reflections on the Internet, business, and society*. New York: Oxford University Press.

Census of India. (2011) *Primary census abstracts*. West Bengal. New Delhi: Office of the Registrar General and Census Commissioner.

Chakraborty, S. (2015) "Investigating the impact of severe cyclone Aila and the role of disaster management department-A study of Kultali block of Sundarban," *American Journal of Theoretical and Applied Business* 1 (1), 6–13.

Cho, S., Crenshaw K., and McCall L. (2013) "Toward a field of intersectionality studies: Theory, applications, and praxis," *Signs* 38 (4): 785–810.

Choo, H. and Ferree M. (2010) "Practicing intersectionality in sociological research: A critical analysis of inclusions, interactions, and institutions in the study of inequalities," *Sociological Theory* 28 (2): 129–149.

Costa, E. (2016) *Social Media in Southeast Turkey*. London: University College Press.

Crenshaw, K. (1989) “Demarginalizing the intersection of race and sex: A black feminist critique of antidiscrimination doctrine, feminist theory, and antiracist politics,” *University of Chicago Legal Forum* 1 (8): 138–167.

DiMaggio P. and Hargittai E. (2001) From the ‘Digital Divide’ to ‘Digital Inequality’: Studying Internet Use as Penetration Increases. Working Paper Series, 15. Princeton University: Center for Arts and Cultural Policy Studies.

Donner, J. (2015) *After access: Inclusion, development, and a more mobile internet*. Cambridge, MA: MIT Press.

Fernandes, L. (2000) “‘Nationalizing the global’: media images, cultural politics and the middle class in India,” *Media, Culture & Society* 22 (5): 611–628.

Gershon, I. (2010) *The breakup 2.0: Disconnecting over new media.* Ithaca, NY: Cornell University Press.

Green, N. and Haddon L. (2009) *Mobile communications: An introduction to new media*. Oxford: Berg.

Gunkel, D. (2003) “Second thoughts: Toward a critique of the digital divide,” *New Media & Society* 5 (4): 499–522.

Helsper, E. J. (2012) “A corresponding fields model for the links between social and digital exclusion,” *Communication Theory* 22 (4): 403–426.

Helsper, E. (2021) *The digital disconnect: The social causes and consequences of digital inequalities.* Thousand Oaks, CA: Sage.

Hobbis, G. (2020) *The digitizing family: An ethnography of Melanesian smartphones.* London: Palgrave Macmillan.

International Telecommunication Union (2019) "Measuring digital development: Facts and figures 2019," Geneva: ITU Publications.

International Telecommunication Union (2020) "Measuring digital development: ICT price trends 2020," Geneva: ITU Publications.

Jodhka, S. S. (2016) "Revisiting the rural in 21st century India," *Economic and Political Weekly* LI (26 and 27): 5–7.

Johnson, K. (2001) "Media and social change: The modernizing influences of television in rural India," *Media, Culture & Society* 23 (2): 147–169.

Lai, J. and Widmar, N. (2020) "Revisiting the digital divide in the COVID-19 era," *Applied Economic Perspectives and Policy* 43 (1): 458–464.

Loader, B. (1998) "Cyberspace divide: Equality, agency, and policy in the information society." In B. D. Loader (ed.), *Cyberspace divide: Equality, agency, and policy in the information society*. London: Routledge.

Lowrie, I. (2018) "Algorithms and automation: An introduction," *Cultural Anthropology* 33 (3): 349–59.

Mansell, R. and Steinmueller, W. (2000) *Mobilizing the information society: Strategies for growth and opportunity*. Oxford: Oxford University Press.

McCaffrey, K. and Taha, M. (2019) "Rethinking the digital divide: Smartphones as translanguaging tools among middle eastern refugees in New Jersey," *Annals of Anthropological Practice,* 43 (2): 26–38.

Ministry of Electronics & Information Technology, Government of India (2019) India's Trillion Dollar Digital Opportunity. www.digitalindia.gov.in/ebook/MeitY_TrillionDollarDigitalEconomy.pdf. (Accessed 2 July 2021).

Munshi, S. (2012) *Remote control: Indian television in the new millennium.* Westminster, UK: Penguin.

Negreiro, M. (2015) "Bridging the digital divide in the EU," *European Parliamentary Research Service*.

Nisbett, N. (2007) "Friendship, Consumption, Morality: Practising Identity, Negotiating Hierarchy in Middle-Class Bangalore," *Journal of the Royal Anthropological Institute* 13 (4): 935–950.

Oreglia, E. (2014) "ICT and (personal) development in rural China," *Information Technologies and International Development* 10 (3): 19–30.

Rangaswamy, N. and Cutrell E. (2012) "Anthropology, development, and ICTs: Slums, youth, and the mobile internet in urban India," *Proceedings of the Fifth International Conference on Information and Communication Technologies and Development*, 85–93.

Robinson, L., Cotton S. Ono H., Quan-Haase A., Mesch G., and Chen W. (2015) "Digital inequalities and why they matter," *Information, Communication & Society* 18 (5): 569–582.

Robles, J. M. and Torres Albero, C. (2012) "Digital divide and the information and communication society in Spain," *Journal for Spatial and Socio-Cultural Development Studies* 50 (3): 291–307.

Telecom Statistics of India. (2019) Economics Research Unit: Department of Telecommunications Ministry of Communications. Government of India. New Delhi.

Tenhunen, S. (2018) *A village goes mobile: Telephony, mediation, and social change in rural India.* New York: Oxford University Press.

Tsatsou, P. (2011) "Digital divides revisited: What is new about divides and their research?" *Media, Culture and Society* 33(2): 317– 331.

United Nations Children's Fund and International Telecommunication Union. (2020) *How many children and young people have internet access at home? Estimating digital connectivity during the COVID-19 pandemic*." New York: UNICEF.

Van Dijk, J. (2005) *The deepening divide: Inequality in the information society.* London: Sage.

Van Dijk, J. (2006) "Digital divide research, achievements, and shortcomings," *Poetics* 34 (4-5): 221–235.

Van Dijk, J. (2020) *The digital divide*. Oxford: Polity Press.

Wallis, C. (2015) *Technomobility in China: Young migrant women and mobile phones.* New York*:* New York University Press.

World Bank. 2012. *Information and communications for development 2012: Maximizing mobile*. Washington, DC: World Bank.

Ventkatraman, S. (2017) *Social media in South India*. London: University College Press.

---

[i] The research in 2018 for this article was funded by the Academy of Finland (project 318782) as part of the project "Sustainable Livelihoods and Politics at the Margins: Environmental Displacement in South Asia."

[ii] Attewell (2001) coined the widely used terms first level divide and second level divide.

[iii] Robles and Torres Albero (2012) first used the term third divide to address the outcomes and benefits of digital media use.

[iv] The dominant caste, both numerically and in terms of land ownership, is the Tilis (50%). Other major caste groups are the Bagdis (15%) and Casas (16%). Most Tilis and Casas own land, while most Bagdis, who are classified as a scheduled caste, earn their livelihood by means of daily labor—agricultural work or work in the brick factories.

[v] These shops charged Rs 20–25 per film and Rs 2–3 per song, whereas one could purchase a large selection of songs and films in the village with just Rs 25.