Digital Inequalities in Times of the COVID-19 Pandemic in Israel and Germany

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Abstract:

With the global spread of COVID-19, various countries closed their borders, called for social distancing, and to stay at home. Thus, creating digital platforms as essential means of communication for interpersonal encounters, public information, education systems, and access to vital needs was of utmost importance. These developments increased access to the Internet and digital media, which are still not equally available to all at national and international levels. Digital inequalities, whether within or between countries or various socio-cultural communities, have become a significant factor together with the increased need for and use of digital media access. The chapter explores the role of digital inequalities in the context of COVID-19 in two countries (Germany and Israel), considering three social dimensions: (1) education, (2) access to vital needs, and (3) surveillance apps. Exploring these phenomena from a comparative perspective contributes to improve understanding the social role of digital inequalities in times of crisis. **Keywords: Coronavirus, digital media, communication, Internet, inequality**

1. Introduction: COVID-19, A Magnifying Glass for Digital Inequalities

With the global spread of COVID-19, various countries have begun to close their borders and to apply some level of closure (also known as "lockdown") and calls for social distancing and to stay at home (Kay 2020). Numerous public and private, professional and interpersonal activities as well as the fulfillment of basic social needs were transferred to digital platforms. Various institutions shifted to work primarily or exclusively through online platforms and numerous individuals use social and digital platforms to keep in touch with their relatives and acquaintances. As interpersonal and professional communication increasingly takes place in the digital sphere, digital spaces become more important for the fulfillment of basic needs (e.g., food supply, education, information, health care, welfare). This shift highlights the importance of access to the Internet and digital media in everyday life as well as the construction of new digital geographies that emerge from these digitization processes (Ash, Kitchin and Leszczynski 2018). The societal means of dealing with the pandemic lead to rapid transformation of everyday communication to the digital sphere and as such highlights the essential role of access to the Internet and digital media and their impact on the quality of everyday life. Throughout history, social inequality is replicated and amplified by new technologies and times of crisis, which became to be a new platform for long-established inequalities. However, the interaction between new technologies and crisis acts as a magnifying glass for social inequalities by its overwhelming effect on underprivileged individuals and groups.

Previous studies have already identified the inequality in distribution of access to the Internet and digital means in the national and international arena (van Deursen 2020). The COVID-19 crisis highlights the magnitude of digital inequalities, particularly in areas where there was a lack of offline alternatives for everyday life activities and for underprivileged individuals and groups. The interaction between new technologies and crisis emphasizes the risks and threats of digital inequalities – whether between countries and regions, generations, as well as socio-cultural communities.

Current digitization processes underline the importance of understanding the ways in which offline and online inequalities interact and intensify other social inequalities. Crises act as magnifying glasses for temporal and special elements of social phenomena and as such give us an opportunity to "zoom in" and gain a better understanding of the mechanisms of social inequalities, both in the online and offline spheres of life (Nimrod 2020, 2021; Shomron 2021). Similar to other social, economic and climatic disasters (Reid 2013), the COVID-19 pandemic as a global health crisis constitutes a unique setting for studying processes underlying social inequalities, such as digital inequalities and thereby enabling a better understanding of the ways they are operating. The COVID-19 crisis is intensifying existing inequalities and their significant effects on everyday life. Thus, it is revealing existing cleavages within socio-digital contexts that in stable times were easier to be ignored. Thereby, the COVID-19

pandemic offers an opportunity to understand the social and political roles of digital inequalities and can help us to better understand this phenomenon and its resulting social vulnerabilities. This chapter aims to explore various dimensions of digital inequalities highlighting in particular the intersectional character of digital inequalities in times of crisis. We will focus on the role of the COVID-19 crisis and its impact on the interaction of social and digital inequalities in three specific spheres: (1) education, (2) vital needs, and (3) surveillance apps by looking at two countries: Israel and Germany.

2.Theorizing Digital Inequalities

Social inequality is the outcome of unequally distributed access to resources and rights based on hierarchies of class, race, ethnicity, age, gender, and sexuality (Allemann-Ghionda 2011; DiMaggio and Hargittai 2001; Epstein, Nisbet and Gillespie 2011; Norris 2001; Zwengel 2010) and their intersections (Bitman and John 2019; Crenshaw 1989, 1994; Walgenbach 2012; Winkler and Degele 2009). Digital inequalities are a bias in the distribution of access to information and communication technologies (ICTs). Therefore, existing social inequalities affected access of individuals and groups to digital media technologies as a result of internal or external motivations (Katsabian 2021, Forthcoming; van Deursen 2020). External dimensions of digital inequalities refer to a structural bias in access to technologies and its effects. Internal dimensions of digital inequalities refer to differences in abilities and willingness to use technologies (Haleva-Amir 2013, 2015; Scheffer 2020; Schejter and Tirosh 2016; Zelenkauskaite and Bucy 2016). At its core, *digital inequalities* is a comparative perspective on the results of the interaction of social inequalities with new media technologies, taking into account both the advantages and disadvantages resulting in multilayered access to ICTs (van Deursen 2020). Thus, digital inequalities interrelate with various social, cultural and political dimensions of inequality that replicate and increase in the digital arena.

In the last two decades we have witnessed an increased scholarly attention in exploring the role of digital inequalities (also known as digital divide), with a focus on its social, psychological, and cultural component (e.g., Mossberger et al. 2003; Van Dijk 2005; Witte and Mannon 2010). Previous studies of digital inequalities point to the different dimensions of this phenomenon, including motivation and literacy, social elements and access to technological means (DiMaggio and Hargittai 2001; van Dijk 2006), as well as the elaboration on geographical spheres. The latter includes a debate on global inequalities, e.g., differences between the Global South and North (Norris 2001), and local inequalities e.g., between urban and rural areas (DiMaggio and Hargittai 2001; Scheffer 2020). These components, and their interplay, can lead to inequality in access to digital technology and influence the participation in public life (Boyd and Ellison 2007; Norris 2001; Papacharissi 2002).

In this chapter, we understand digital inequalities as a multidimensional phenomenon connected to digitally mirrored replication and penetration of existing social inequalities in the offline sphere and

their intersection (Hargittai 2002; Bruno et al. 2010; Robinson et al. 2015). Digital inequalities are considered an online performance of offline social inequalities and are preserving and reinforcing each other. This leads to the reproduction of new spaces of inequality in the digital arena.

3. Digital Media in Israel and Germany

Israel and Germany are well-developed countries in terms of digital infrastructure and average access to digital media and digital technologies (BMVI 2020; Scheffer 2020; Haleva-Amir 2011, 2016; Yeshua-Katz and Efrat-Treister 2020). However, the use of ICTs within each society varies and there are differences in perceptions and approaches towards digital media technologies (Barak 2018; Bond et al. 2018; John 2011; Tsatsou 2021). The two countries were selected in order to study digital inequalities, due to the similarities and differences between them with intersecting unique uses and levels of inequality.

[Figure 1 about here]

Looking at the percentage of Internet usage by age group and over time in Israel and Germany (see Figure 1) the data show that while the vast majority of the young generation (younger than 44 years old) in both countries use the Internet, a lower percentage of the older people (over 65 years) have used the Internet since 2009. Among the younger generation, a vast majority use the Internet, with an increased usage over the past decade. While in 2009, 77 percent in Israel and 97 percent in Germany used the Internet, in 2019, this rose to 94 percent and 99 percent, respectively. Among the older generation (older than 65 years) the pattern is similar, but the percentage of use is lower; in 2009 only 24 percent in Israel and 28 percent in Germany used the Internet, while in 2019, 67 percent of the generation older than 65 years used the Internet. Despite the significant increase among the older generation, there still are significant differences between younger and older individuals in percentage of Internet use in both countries.

Only in 2016 did more than half of the older generation in both countries use the Internet. In other words, the data show that in both countries, generation is a major social factor for predicting digital inequalities. Generational digital inequalities become crucial since older people are a risk group in the context of COVID-19. At the same time, we see a transition from digital to face-to-face communication and publishing most of the instructions and information regarding protection from the coronavirus, which governments and official institutions are circulating on digital platforms. Elderly people have less access compared to younger generations.

[Figure 2 about here]

At this point, a specific character of Israeli society is worth pointing out: In Israel, there are two social groups with lower levels of access to information and communication technologies ("ICTs"): the ultra-Orthodox (known also as Haredi), who prohibit the use of new technologies (to elaborate see: Campbell 2011; David and Baden 2020; Rosenberg and Rashi 2015), and the Arab citizens of Israel, who have a limited infrastructure (to elaborate see: Schejter and Tirosh 2016). Figure 2, presents CBS-data (2021) on the degree of Internet usage over time among the ultra-Orthodox and the Arab communities in comparison to secular people (known also as Hiloni) in Israel. While the vast majority of secular Jews use the Internet, the percentage of the ultra-Orthodox and Arabs, who have used the Internet was lower (Figure 2). A majority of the secular Jews use Internet; 80 percent in 2009 and 95 percent in 2019. However, only 32 percent in 2009 and 56 percent in 2019 among the ultra-Orthodox community, and among the Arabs 35 percent and 81 percent, respectively.

4.The Present Study

In order to explore the role of the COVID-19 pandemic in highlighting the interaction of social and digital inequalities, the following sections look closely at three social domains, adapting a comparative perspective on Israel and Germany: education, vital needs, surveillance apps. Emphasize is placed on a variety of intersecting inequalities that are at the center of this phenomenon in both countries. Drawing on these domains, we examine how access to digital media interacts with social and cultural inequalities.

Israel and Germany were chosen, in order to explore the impact of the digital inequalities for three main reasons: (1) different social and political culture, (2) forms and expressions of digital inequalities, and (3) the policy regarding the COVID-19 crisis. Both countries differ in their approach to the pandemic, due to various reasons, among them, the different social and political cultures and policies regarding the COVID-19 crisis.

The German health care system is regulated on a federal level. All regulations are drawn up by the Federal Government and the Federal Ministry of Health, but in everyday life, they are enforced by each of the sixteen partly sovereign federal states ('Länder' in German, Federal Ministry of Health 2020). This leads to different instructions and regulations regarding health issues, e.g., the COVID-19 pandemic in Germany, while throughout Israel, there is one central government that gives uniform guidelines. In addition, as a European Union (EU) member Germany has less flexibility and freedom in making political decisions in comparison to Israel, e.g., maintaining some level of open borders with other countries and limited options of closing all international airports, while Israel does not have this problem.

Additionally, while in Germany restrictions on freedom of movement as well as a violation of the right to data privacy have been perceived as extreme measures that should be used sparingly, in Israel these issues are perceived as less important when it is in conflict with security and serving life issues. This allows the government to severely restrict the freedom of movement as well as to use technological means that harm the right to privacy (Masur and Trepte 2021; Quinn and Epstein 2018). Thus, in Israel from the outbreak of the pandemic (March 3rd, 2020), the government implemented a strict restriction on the freedom of movement, e.g., closure of borders to non-residents, extensive isolation obligation, as well as strict surveillance measures by the Shin Bet (the Israel Security Agency) using tracing technologies to monitor violations of the COVID-19 regulations. In addition, the government launched *Hamagen* (Hebrew: "The Shield"), a GPS-based app to monitor if citizens were close to another person diagnosed with Coronavirus (Cahan, 2020). In Germany, however, restrictions were less severe and imposed in accordance with EU-policy. In addition, restrictions on the right to move freely within the country have been limited only slightly (e.g., the number of direct contacts), in conjunction with short-term, selective border closures. Furthermore, the corona monitoring app is based on Bluetooth which has a lower effect on the right to privacy.

5.Three Social Domains of Digital Inequalities: Education, Vital Needs, and Surveillance Apps

In order to examine the role of the COVID-19 crisis in intensifying existing digital inequalities and their effects on everyday life, we will draw on three social domains: (1) education, (2) access to vital needs, (3) surveillance apps in Israel and Germany. By exploring these three social domains, we will reveal the ways in which the COVID-19 crisis reproduces and reinforces existing social inequalities and their digital implications. These three social domains were chosen in order to explore a variety of aspects of the interaction between social and digital inequalities. The first social domain we examined is the education system and the effects the COVID-19 crisis generates on mainly young people (students) but also on adults (teachers and professors). The second social domain is the vital needs, which affect everyone, but especially groups at risk of being infected with the coronavirus (a weakened immune system, heart or lung problems, and adults). The third social domain is surveillance apps that affect everyone in a society, but especially social and political minorities who are concerned about surveillance and abuse of power.

5.1. Education

The effect of digital inequalities in educational contexts has been discussed frequently by scholars and policymakers (Cyr et al. 2021; Wineburg and McGrew 2019; OECD 2020a, 2020b) and there have been various discussions on the challenge of implementing digital means in the education system from

primary schools to higher education institutes. However, the rapid transition from face-to-face to digital teaching which has been forced by the COVID-19 pandemic has created new opportunities for those who have access to digital media, by making it simpler to participate in online courses in spatially distant locations (cities, countries and continents) without the need for physical presence. At the same time, this transition has also brought challenges for those who do not have (sufficient) access to digital media, depending on various factors, among them, the development of infrastructure, the size of the country, the strength of the economy, regulations, and attitudes and perceptions toward the penetration of digital technologies. At the beginning of 2020, in both countries, the integration of digital technologies for teaching was relatively low (Autorengruppe Bildungsberichtertattung 2020a, 2020b; CBS 2021; OECD 2020b). Therefore, the rapid transition to digital learning due to the current necessity was made without sufficient means to perform it and highlight existing divides and inequalities that were less prominent before.

In Israel the digitization of the education system, the level of digital literacy and the use of digital means in everyday life have already existed to some degree (CBS 2021) and the Ministry of Education has been encouraging teachers to use digital platforms for teaching since 2013 (Circular of the Director General of the Ministry of Education, 2013). In addition, the public sector in Israel has shifted to digitization for various daily encounters (e.g., several tax reports, social security insurance, and the public health system). In 2015, the Israeli Ministry of Education established a program to implement a pedagogy adapted to digital teaching and the use of digital means in teaching. Thus, before the COVID-19 crisis, about half of the primary and high schools had access to a proper digital infrastructure to conduct an effective digital teaching. However, there are significant differences within the Israeli society. While in central places there is a high level of access to the Internet, there is significantly less access in the periphery (Zarhovitz 2019). Additionally, members of the ultra-Orthodox communities and parts of the Arab population have limited access to ICTs (Abu-Kishk and Mendels 2020; David and Baden 2020; Schejter and Tirosh 2016) and as such reproduce inequalities in different aspects of life, including education. In order to bridge this gap with the outbreak of the COVID-19 crisis and the increasing restrictions in Israel, the Ministry of Education funded the purchase of tens of thousands of kosher mobile devices (a mobile device with rabbinical approval, to elaborate see Rosenberg and Rashi 2015) for ultra-Orthodox students in order to enable access to digital teaching (Cohen, 2021).

The German government potentially provides schools with funding for promoting a digitization process through a special support program (‘DigitalPakt Schule’, BMBF 2021). However, the implementation of digital technologies is relatively slow or even fails due to the conflict between values (e.g., data privacy versus free access to information), perceptions and beliefs of key figures (e.g., personal or ethical resistance to new technologies), and bureaucracy which sometimes delays the process of assimilation

of changes in the public system. With the shift to digital teaching, the lack of pedagogical concepts and of technologies and platforms for sustainable online teaching became a significant factor. At a time in which digital technology is crucial, it shows that the majority of German schools lack the technical equipment and knowledge to implement digital education spaces, in some cases even Internet connectivity (Autorengruppe Bildungsberichterstattung 2020a, 2020b). This affects all teachers and students in the education system, yet its effect on students from marginalized groups was harder (e.g., students with special needs, students from lower socioeconomic status where not every family member has access to a computer or form rural areas with limited availability of Internet).

Attitudes and perceptions regarding digital teaching are another factor that intensifies the challenges in the penetration of digital technologies in the German education system. Data from a longitudinal study conducted among German teachers in winter 2021 (N=1,015) show that 62 percent use at least one type of digital platform for teaching, while less than a quarter use a video conferencing software in the classroom (Forsa 2021). This is also linked to the high level of skepticism among (older) teachers toward digital teaching and learning, as well as a lack of pedagogical concepts and experience (Kerres 2020). Frequently, teachers were not adequately or professionally trained and prepared to make meaningful use of digital platforms in the classroom (OECD 2020b).

A similar challenge is witnessed in higher education institutions, since a majority of academic institutes (especially public universities) in Germany did not integrate sufficient digital teaching methodologies, pedagogical strategies and platforms prior to the COVID-19 crisis (Gilch et al. 2019). With the outbreak of the pandemic most universities managed to implement digital teaching platforms and as such now provide a certain level of digital learning – yet a lack of equipment and practical experience led to several challenges (Zawacki-Richter 2020). In Israel, in the last decade, several higher education institutes have already successfully launched and implemented digital teaching platforms and have used some level of digital platforms for learning. With the outbreak of COVID-19, higher education institutions in Israel were able to use this knowledge in order to implement digital teaching platforms relatively quickly and efficiently. At the same time, about 90 percent of the Bedouin students in higher education institutes in Israel have faced difficulties in digital learning (Abu-Kishk and Mendels 2020).

The COVID-19 crisis has intensified processes of implementing digital technologies in the education system in Israel and Germany, both in schools and in higher education institutions. The use of such digital platforms helped create alternative learning environments. The immediate COVID-19 restrictions certainly accelerated processes of digitization in these areas. The lack of institutional and public willingness to integrate digital learning technologies has an impact on both teachers and students. The inequalities in access to digital devices and to adequate Internet connectivity have

resulted in the preservation and reinforcement of existing social inequalities in the education system. The successful future use of digital learning technologies depends on adapting traditional forms of learning to the digital format, using an appropriate, critical and reflective pedagogical approaches.

5.2. Access to vital needs

In the last decade, the use of digital media for public and private services has increased all over the world. Digital media is becoming central to performing basic activities of daily life and processes that challenge people with less access to the necessary infrastructure (Nimrod 2020, 2021; Shomron 2021). The COVID-19 pandemic has enforced rapid transition to digital platforms for accessing vital needs (e.g., purchase of food, medical supplies, daily essentials, access to public service and urgent information). Before the outbreak of the pandemic, the digitization of public services in Germany was average relative to other EU countries, aiming for transforming all services to the digital format by 2022 as part of the country's digitization strategy (European Commission 2020; Die Bundesregierung 2020). Specifically, the digitization of the health care system in Germany is still at a basic stage (FES 2016) and lags behind when compared to other countries worldwide. According to the *Digital Health Index,* which is made up of the three sub-indices policy-activity (political-strategic action), digital health readiness (technical implementation and semantic maturity), and actual data usage in healthcare (Bertelsmann Stiftung 2018), Germany is on rank 16 (of 17), whereas Israel ranks 4 in digitization of the health care system. In Israel, a significant share of the public services includes online versions and 46.6 percent of the Israeli public uses online governmental services (CBS 2019).

In both countries, numerous private shops, supermarkets, and restaurants had already used digital platforms before the outbreak of the COVID-19 crisis while many others did not operate digitally before. Thus, the COVID-19 crisis has affected the latter more, especially small, owner-operated stores who faced challenges in moving to the digital sphere. The lack of online platforms for shopping has brought additional challenges for German shops and restaurants, sellers and buyers to function under the COVID-19 restrictions, which prohibited face-to-face operation. For example, a considerable part of those stores sold exclusively through cash payment. With the increasing fear of viruses and the need for online shopping, these stores were required to assimilate the option of payment using debit or credit card. This practice, which has been established in various countries was not much used in Germany, due to, among other things, skepticism regarding electronic payment among the German population. The readiness to use e-shopping services differs between the two countries: While 48 percent of the Israeli population used digital shopping before the pandemic, in Germany only 12.2 percent went shopping online (Destatis 2021b). The skepticism toward using digital payment methods led to new initiatives, e.g., the establishment of local delivery services that allows customers to order

products, whereas others implemented creative ways to continue to operate, using semi offline solutions (e.g., ordering by phone). However, other shops had to close down.

Compared to that, in Israel 48 percent use these online platforms for shopping and most of the people use credit cards and other payment apps. However, despite the extensive use of digital platforms for shopping, there are several groups that have limited access to the Internet, such as, older people (see Figure 1), Arabs (Schejter and Tirosh 2016) and the ultra-Orthodox community members (David and Baden 2020). With the outbreak of the COVID-19 pandemic, the ministry of health and other governmental institutes communicated mainly through legacy media (television and radio) and digital media (Websites, SMS, WhatsApp, Telegram). However, the ultra-Orthodox and Arabs have limited access to the Internet (as well as to the legacy media) and as such some of them have not been able to access this information. In addition, with the outbreak of the COVID-19 crisis the option to use the offline version of these services was canceled, leading to increased challenges for access to public services for older people, Arabs and ultra-Orthodox community members.

Access to vital needs also includes access to important information, e.g., new regulations as well as health and governmental instructions. In Germany and Israel, language was an additional element of social and digital inequalities in COVID-19 times since, with the outbreak of the COVID-19 crisis, most of the public services provided by the government were available in German or Hebrew. Services in other languages were much less accessible. Therefore, people who do not speak German or Hebrew fluently have faced an additional challenge in access to information about the government instructions. In both countries, native speakers among activists and those speaking other languages voluntarily translated the governmental instructions and information for the people who do not speak the local language. One way to deal with this gap is provided by digital platforms of foreigners, such as *Amal Berlin*, where daily news were translated into Arabic and other languages (e.g., Dari/Farsi), in order to increase access to the latest news and information on the pandemic for people with insufficient German language skills (e.g., refugees). In Israel, mainly the Arab population (which constitutes about 20 percent of Israeli citizens) is facing similar challenges as well as other groups of immigrants and foreigners who do not have sufficient knowledge in Hebrew. However, today, after about one year into the COVID-19 crisis, it seems that in both countries, Germany and Israel, most of the information is translated into other languages also by the public sector.

The COVID-19 crisis has presented diverse challenges to all members of society. These include the transformation of various behavioral norms (handshakes, hugs, kisses), but also the way people access and consume essential needs (food, medicine, or information). The use of digital platforms has opened new doors to alternatives. Nevertheless, inequalities in access to digital infrastructure have existed

and continue to exist. These lead to the preservation and reinforcement of pre-existing social inequalities. In both countries, minority groups (e.g., Arabs in Israel, immigrants in Germany) and older people are particularly affected. Their access to vital information is sometimes limited. As a result, they tend to be at higher risk of being infected with the coronavirus and they are not informed of measures to reduce its impact. To successfully and carefully implement policies in the future, it is necessary to have diversity in decision-making processes which will help to understand the challenges minority groups face in real time.

5.3. Surveillance apps

The fact that digital media technologies are increasingly used has created a new arena for debating the legitimacy of governments' and private institutes' surveillance measures and on the right to privacy (Masur and Trepte 2021; Morozov 2011; Quinn and Epstein 2018; Zidani 2018). Among democracies, there is a consensus that the right to privacy can be violated in order to monitor risk behavior (e.g., terrorist attacks) and to save lives. However, there is disagreement as to what is considered as risk behavior and what are the conditions and regulations for violating the right to privacy. With the outbreak of the COVID-19 crisis, human society has faced a new risk to life. One of the ways to reduce it is through maintaining social distance and control over interpersonal meetings. In order to monitor people who have been in contact with those diagnosed with the coronavirus and prevent them from continuing to spread it, various countries have chosen to use digital surveillance technologies to monitor citizen movements and proximity to people diagnosed with the coronavirus. In order to use technologies to prevent and control the spread of the coronavirus, governments and the technological industry around the world have developed COVID-19 tracking apps (e.g., TraceTogether-App in Singapore, COVIDSafe in the U.S.A., Corona-Warn-App in Germany, and *Hamagen* in Israel). Users can install these apps on their smartphones for free via one of the app stores. The basic prerequisites for downloading are the availability of a smartphone, an operating system that is as up-to-date as possible (there have been cases where apps could not be used because the software was out of date), and internet access on the smartphone. The development of those apps raised another facet of the risk of digital inequalities for the entire society: on the one hand via the risk of (ab)use of surveillance technologies and on the other hand that individuals and those who do not have access to suitable devices will not be able to get exposure notifications.

Germany and Israel represent two different approaches for the use of such tracking apps and surveillance technologies. While in Germany, there is stronger emphasis on the right to privacy even if it may harm life and thus there are strict regulations on using invasive technologies. In Israel, there is a stronger emphasis on the right to life even if it may harm other rights such as privacy. Thus the

government uses invasive surveillance technologies to monitor the spread of the coronavirus. As a result of these two different approaches, in Israel at the beginning of March 2020, the government implemented surveillance measures by the Israel Security Agency and at the end of March the first version of *Hamagen*, the COVID-19 tracing app was launched. In Germany, however, the Corona Warn App used as the first COVID-19 tracing app was launched in June 2020 only, with 26.2 million downloads until March 2021 (RKI 2021). In addition, while in Germany in order to reduce the harm to the privacy of the users, the Corona Warn App was based on Bluetooth technology, in Israel *Hamagen*, a GPS-based app was provided with greater risk to user privacy. The use of digital surveillance technologies highlights once again the issue of social and digital inequalities in times of crisis. In both countries, in order to use the COVID-19 app, an individual needs to hold a smartphone with one of the latest operating systems which excluded those who do not have such a device or operating system from using the app. While in Germany it raises mainly the relevance of age and language since older people had difficulties using the app. Additionally, the app was available only in German and English at first. Only at the end of 2020 did it start to be available in additional languages. In Israel, it affected older people, but also Arabs and ultra-Orthodox, most of whom do not have appropriate devices for using these apps.

6. Conclusion

The COVID-19 pandemic has highlighted the important role of the Internet and digital media as the new public sphere used for everyday life activities and interpersonal communication (Katsabian Forthcoming; Nimrod 2020, 2021; van Deursen 2020). With the rapid and comprehensive growth in the transition to performing face-to-face activities using digital platforms during the COVID-19 times, researchers, activists, and policymakers should be aware of digital inequalities and the ways in which digitization processes affect different groups. The first year of the COVID-19 crisis highlighted the advantages and disadvantages of digital technologies, yet we need to remember that the crisis "does not exist in a vacuum – it has enormous potential for positive change, but can also reinforce and magnify existing fault lines and worsen economic and other inequalities" (UN 2020: 2). The chapter focuses on three social domains (1) education, (2) vital needs, and (3) surveillance apps in Israel and Germany in order to explore the role of digital inequalities during COVID-19 times.

The chapter revealed and highlighted ways in which the COVID-19 crisis reproduces and reinforces existing social inequalities and their digital implications. The discussed examples and findings confirm previous studies highlighting the effect of digital inequalities (Cyr et al. 2021; Nimrod 2020, 2021; Shomron 2021; Wineburg and McGrew 2019), by enforcing rapid transition to digital platforms for everyday life activities (e.g., learning, teaching and accessing vital needs). The digitization process creates new opportunities for those who have access to digital media, but also brings about challenges

for those who do not have (sufficient) access to digital media in both countries. At the same time, the fact that digital media technologies are increasingly used has created a new arena for debating the legitimacy of governments' and private institutes' surveillance measures and on the right to privacy (Masur and Trepte 2021; Morozov 2011; Quinn and Epstein 2018; Zidani 2018). These developments, once again, highlight the issue of social and digital inequalities in times of crisis in both countries. The examples of Israel and Germany illustrate that these issues are also relevant to be discussed in countries that are generally considered to be well-connected to the digital world and thus provide us different perspectives on digital inequalities in the international arena. At the same time, the examples discussed call for further empirical studies regarding the effects of social and political inequalities on the risk to be harm by the COVID-19 pandemic in the national and international arena. At the same time, the examples discussed call for further empirical studies regarding the effects of social and political inequalities on the risk to be harm by the COVID-19 pandemic in the national and international arena. These empirical studies should focus on the long-term effects of the interaction between social and digital inequalities on students from ethnic and racial minorities, socioeconomic disadvantage groups and learning disabilities. Such an approach can help us better understand the effects of inequalities and the ways in which they can be reduced.

New spaces and challenges, which have come to the surface due to the COVID-19 crisis, are a unique opportunity to understand the profound effects of digital inequalities in both countries. The phenomena reviewed in this chapter regarding the integration of digital technologies in everyday life and the important role of existing digitization processes as well as the willingness for adaptation to social changes (e.g., to digital platforms) have been reflected in recent months, after launching a worldwide COVID-19 vaccination campaign. While in Germany in March 2021, bureaucracy and the lack of suitable digitization of the health system continue to influence the way of dealing with the COVID-19 crisis, Israel has seen 20 years of assimilation of digital platforms in the healthcare system. These differences are particularly prominent in the vaccination campaign of Israel, where digital platforms in the healthcare system help to conduct a fast and productive vaccination campaign while in Germany we are witnessing a significantly slower vaccination campaign. Despite the increased willingness of older people to use digital devices during the pandemic, it seems that the combination of bureaucracy and willingness for rapid adaptations together with the lack of previous and functional infrastructure leads to a slow vaccination campaign in Germany in comparison to Israel.

Finally, this chapter presents the important role of studying digital spaces and geographies. We highlight the need for rethinking the role of access to the Internet in our society, which has often been considered as a privilege. The novel COVID-19 pandemic has raised new challenges for various aspects of social life, one central domain is the tension between different human rights. It emphasizes the

importance of access to the Internet as a "right" as it provides access to education, vital needs, and social life. The findings regarding the important role of digital media and access to digital platforms in COVID-19 times calls for a discussion on access to the Internet also as a human right (e.g., Skepys 2012; Szoszkiewicz 2018). With the increasing debate on digital inclusion (UN 2020), a stronger critical perspective on digital inequalities in private and public spaces, e.g., education and higher education, politics, economy, access for information and for leisure, urges on the agenda of social and academic debates. In addition, the spread of misinformation has increased the necessity of transparency and responsibility by digital platforms in addition to neutral and democratically media regulation, in order to prevent the misuse of and misinformation in digital media in times of such a crisis. Discourses on digital human rights, neutral and democratically legitimized media regulation (e.g., of tracing apps) or possibilities for preventing misuse and disinformation should also be sensitive to diversity as well as ethics. The COVID-19 pandemic offers a unique opportunity to look closely at the roles and effects of digital inequalities and thereby can contribute to our understanding of emerging digital geographies of (in)equality at local and international arenas.

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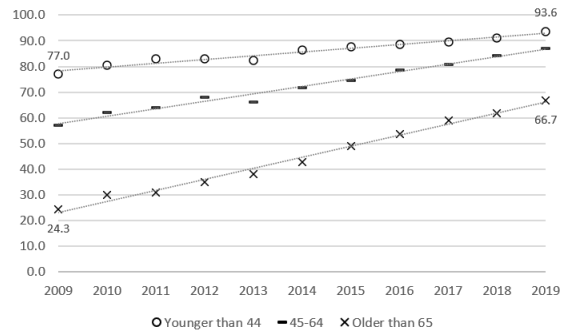
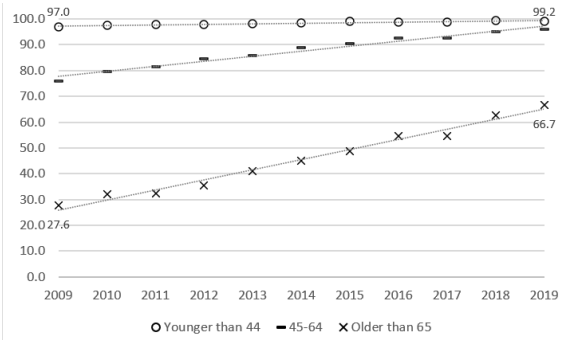
Figure 1. Percentages of Internet usages over time by age in Israel and Germany

In Israel



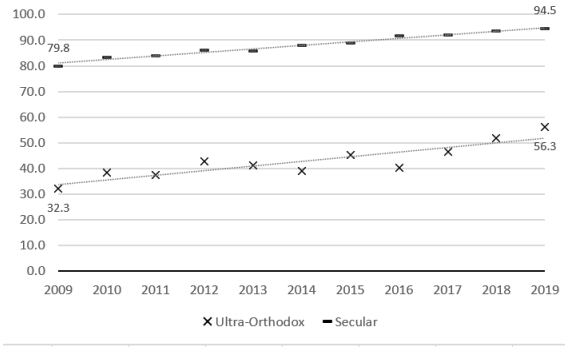
In Germany



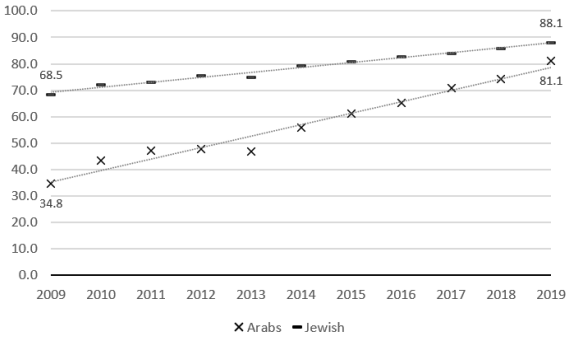
Source: for the Israeli data, the Israeli Central Bureau of Statistics (CBS 2021). For the German data, the Federal Statistical Office (Destatis 2021a)

Figure 2. Percentages of Internet usage over time among ultra-Orthodox and Arabs in Israel

Among ultra-Orthodox



Among Arabs



Source: Israeli Central Bureau of Statistics (CBS 2021).