Older Persons, Digital Products, and Standards: The Need for Consumer Protection and Support for Continuous Learning of Older Persons

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Social Aspects of Ageing - Selected Challenges, Analyses, and Solutions [Working Title]

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Chapter

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Abstract

This chapter addresses the need to help older persons adjust to the digital age and describes major challenges that aging persons as well as persons of all ages have to face in light of today's virtual realities. The author proposes how to best facilitate and support older persons coping strategies and how they can obtain and maintain adequate digital literacy and ability to use existing digital resources. The chapter describes the hidden costs of the digital age for older persons and offers six solutions to how these digital challenges could best be overcome from individual, social, and public policy perspectives.

Keywords: digital literacy, older persons' digital challenges, individual coping strategies, community resources, public policy to protect older persons' privacy, and digital competencies

1. Introduction

Human societies have seen an unprecedented age bonus because of the extended life expectancy now reaching 80 years or higher in many developed economies. The number of people who are older than 60 years of age reached 901 million in 2015 representing 12.3% of the total world population. By 2050, it is forecasted that this number will reach 2.09 billion worldwide. For example, in the United States, adults over 65 will outnumber children by 2030, and in Japan, more than 40% of the country will be over 65 by 2060 [1]. This development has changed the demographic distribution of populations and the demand patterns for public services and resource allocation. An important factor greatly impacting these shifts is advances in technology, which has escalated during the COVID-19 pandemic.

With aging populations, there is a growing demand for technologies to better meet the needs of older persons [1, 2]. Information and communication technologies (ICTs) have the extraordinary potential to respond to the demands of this

demographic shift and meet the challenges of a shrinking workforce, as well as improving healthcare and caregiving for older persons. For instance, a sizeable minority of mid-life and older Americans are using ICT devices to manage medical care [3],[1] Artificial Intelligence [4], and Big Data [5]. Drones and robotics and other game-changing technologies are already being harnessed to improve the lives of older persons [4]. For instance, drones are being tested by Japanese farmers, many of whom are older persons, to ease the burden and enhance productivity of applying pesticides and fertilizers on crops. Hi-tech drones come to the aid of Japan's aging farmers [6].

At the same time, there are also key challenges that need to be addressed, privacy and security remain a challenge for older Americans: Just under 18 percent of 50+ adults are confident about their data privacy, but many do not take proactive steps, including passcodes and two-factor authentication, to secure their data [3] including accessibility of these technologies and digital skills for older persons. For example, older Americans are more likely to have access to technology such as desktops and feature phones. Only a small percentage of the 50+ market has access to and adopts recent technologies, including wearables and home assistants [7]. Older Americans are generally less connected than younger persons, including the so-called "digital natives" who have grown up with these technologies [8]. In addition, stereotypes need to be overcome about older persons' disinterest and lack of capacity for digital skills and tech entrepreneurship and there are also instances of exploitation of older people as consumers online [9].

The Decade of Healthy Aging (2020–2030) launched by the WHO[2] and the United Nations and the 2030 Agenda with its 17 Sustainable Development Goals (SDGs)[3] provide strong support for all stakeholders—governments, private sector, and civil society—to commit to policies, regulations, and activities, which can reduce if not push back the still prevalent impact of ageism. The most recent report of the UN Secretary-General of 7th July 2022 takes an additional step and focuses directly on the impact of digital technologies on global aging.[4]

1.1 Methodology

The author's research question pertains to the query as to how much digitalization impacts the lives of older persons. The research method used was literature reviews of key documents published by relevant international and normative organizations such as the World Health Organization, the United Nations General Assembly, and the UN Secretary General's Office.

2. Challenges of the digital area for all ages

Thanks to the multitude of ICT products (internet, mobile phone, and smart-phone) and social media, people, in general, are able to nonstop watch and participate in various forms of webinars, as well as make e-phone calls, send text messages, surf

[1] https://de.wikipedia.org/wiki/American_Association_of_Retired_Persons

[2] (https://cdn.who.int/media/docs/default-source/decade-of-healthy-ageing/final-decade-proposal/decade-proposal-final-apr2020-en.pdf?sfvrsn=b4b75ebc_25&download=true

[3] https://sdgs.un.org/goals + https://en.wikipedia.org/wiki/List_of_Sustainable_Development_Goal_targets_and_indicators).

[4] file:///C:/Users/Saner/Downloads/A_77_134-EN.pdf

the Internet, download apps, and use the built-in camera function to take pictures and share notices *via* Facebook, Twitter, Instagram, and other devices.

However, standards that are the basis for all these AI-ICT digital products also have a hidden cost. The e-devices are based on industry standards embedded and hidden in the ICT devices, which we are using. Using these devices means accepting the many requirements of these ICT products. Knowing how these standards influence our behavior, thinking, and emotions is not possible for most people, whether young or old.

For instance, while wanting to benefit from the opportunities, which modern ICT methods offer, a consumer will not know how the computer chips function and how they are applied, for instance, through blockchains that are used to control and block payment systems or production processes of supply and value chains.

The user of modern ICT tools knows that he/she cannot control the ICT product that he/she is using since understanding how they operate would require technical know-how, which most users today do not have. Hence, we benefit from the fascinating access to a technological product like one based on virtual reality provided we accept the rules given by the programmers and chip engineers.

In other words, we are surfing a digital wave that can take us far into the imaginary sea as long as we do not forget that digital surfing does not depend on our physical strengths but only on our ability to click on the keyboard and navigate the given binary options of the digital game.

Being bound by a given digital program gives us an imaginary sense of freedom when in fact we are only free to click and choose the given options provided by the digital program. These invisible limitations can be compared to the legend of the Procrustean bed of Greek mythology.

Procrustes "the stretcher [who hammers out the metal]" was a rogue smith and bandit from Attica, ancient Greece, who attacked people by stretching them or cutting off their legs, so as to force them to fit the size of an iron bed.[5] The word "Procrustean" is thus used to describe situations where an arbitrary standard is used to measure success, while completely disregarding obvious harm that results from the effort. Like the victims of Procrustes, we get similarly stretched by digital products and standards, albeit mentally (not physically), when we agree to participate in virtual conferences based on virtual tools such as Zoom, Cisco WebEx, Team Viewer, GoToMeeting, and others which structure our human interactions according to rules, which the users cannot change.

3. Being captured by virtual reality restricts people's freedom to interact with other human beings

One aspect of a virtual conference is that, as users/customers, we get captured to be part of this virtual world but once captured, we get "chopped" to place in a Procrustean manner meaning, you have to fit in or better comply with the standard, which for instance can put a participant into virtual rooms or be removed from participation by the zoom host.

The sophisticated programs and standards of virtual devices can be useful; for instance, a participant of a zoom conference can be assigned to a zoom room where

[5] https://en.wikipedia.org/wiki/Procrustes

he/she can talk to other participants as if in physical proximity even though they might be physically far apart from each other.

Having been several times in the role of a host of a webinar (called a "zoom master") who runs the flow of a webinar's meeting, I also discovered the power of control over the interactions between zoom participants. For instance, as zoom master, I can mute or unmute people who are participating in my virtual webinar. I can also tell them that attendees can use the chat option and submit questions for the speakers, and further, I can decide whether or not to forward those questions to the speakers or block the questions from reaching them.

Another impact of virtual conferencing is that days blend into each other. Workdays start to be like weekend days and vice versus, and distances are reduced to fake proximity. A person from Zambia and another one living in Brazil are equally present during a webinar as if they were living in the city where I am living and working as well.

The sudden closeness when a zoom participant is assigned to a virtual zoom room is fascinating from a technology point of view and at the same time worrisome, reminding us of another Greek mythology namely that of Scylla and Charybdis [10] who were according to the legendary Greek author Homer are mythical sea monsters located at opposite sides of the Strait of Messina between Sicily and Calabria, on the Italian mainland.[6] Scylla was described as a rock shoal (described as a six-headed sea monster) located on the Calabrian side of the strait, and Charybdis was a whirlpool off the coast of Sicily. Scylla would grab passing ships with her many arms and devour them, while Charybdis, by creating a whirlpool, would suck passing ships into the centripetal stream of its whirlpool waters [11].

The two monsters were regarded as maritime hazards located close enough to each other that they posed an inescapable threat to passing ships and sailors; avoiding Charybdis might lead a passing ship to end up too close to Scylla and vice versa [11].

We could be drawn into a whirlpool of a multitude of digital programs and hence of hidden standards without noticing that our freedom of movement is being structured by these often invisible electronic structures of the programmer, which capture our attention but then keep us seduced and turned into addicted consumers.

The Scylla experience could come about through the use of multiple apps, which all seem interesting and important at the beginning but which might lose usefulness, and if not "cut off" (meaning deleted) could block a lot of memory on our mobile phone and at worst leading to a paralysis of our computer or mobile device.

Installing many apps can also give us a false sense of autonomy and independence when in reality the logic of these apps makes us forget that we are "stretched on the bed of Procrustes" and are not free anymore to just walk away. The apps' standards that help us access data and people through virtual realities also limit our ability to freely interact with others through physical closeness and hence make us interact with each other through a filter of quasi reality, sometimes blending physical presence with fake reality depending on what additional apps are being blended into a virtual interaction.

Becoming dependent on the use of apps and Internet conferencing tools such as zoom, Webex, and GoToMeeting, a zoom master can make us lose a sense of time and give us the impression that we lost the freedom to stop the seemingly forever stream of virtual realities. Such a sense of losing reality can come about when people spend too many hours watching and interacting in virtual realities, making our awareness

[6] https://en.wikipedia.org/wiki/Between_Scylla_and_Charybdis

become nonlinear and malleable like Salvador Dali's surrealistic artwork, evident in his/her famous painting of a melting watch.

4. Digital realities increase the risk of isolation and loneliness in older persons

The following findings emerged from the literature review. Digitalization forces older persons to cope with multiple challenges. The first challenge can be a sense of loneliness. With growing age, older persons inevitably lose relatives and friends who die away, and they also lose the sense of family when their children leave and move to their own residences. Resulting loneliness can further deepen, should their neighborhood also change due to urban renewal projects and relocation of neighbors, causing loss of social networks, in addition to family ties.

Such losses due to the natural life cycle shrink older persons' psychological living space and exacerbate a sense of isolation, loneliness, and abandonment. This deepens if older persons themselves are forced to move, but cannot find adequate housing, because of financial hardships [12].

A second challenge for older persons, which accelerated due to the impact of the COVID-19 pandemic, is the rapid migration of traditional services (which are public and private) to online service provisions. As a result of COVID-19, consumers were increasingly required to move to using online platforms to fulfill needs, ranging from buying groceries to doctor appointments. Businesses also turned to digital tools in new ways and fast food restaurants created "ghost kitchens" devoted solely to fulfilling online delivery orders [13].

At the same time, public services are also increasingly moving online, for instance, citizens' inquiries and requests for information concerning social security, water and sanitation, electricity, security, and other public services necessary for maintaining daily life. As a consequence, smartphones are needed to call and navigate public administration's webpages and automated general information services.

Older persons with only partial or minimal digital literacy are hence rendered dependent on others to do these necessary online interactions. If alone, or without family, older persons depend on social services, charities, aides, or neighbors to help them meet their simplest needs, and navigate through the rapidly changing digital world.

For those older persons who have only basic digital skills, their need and wish to be in touch with other people through digital means could increasingly put them at risk of being misled by criminals who use fake news to lead older persons astray in order to get access to their bank account or information about access to their living quarters [14].

5. Solutions to fend off the threat of digitally induced powerlessness and hopelessness of older persons

1. Assisting older persons through training and coaching in digital literacy can help older people retain a sense of autonomy, which allows them to do necessary daily life activities, for example, order food, inquire with public authorities, and remain in contact with others, including loved ones [15]. Research has shown that such training has a positive impact on older persons (81–85 years of age) as it increases social networking abilities and reduces loneliness [15].

2. ICT devices and services are quickly changing due to rapid technological innovation and also because of deliberate strategies of companies to increase their bottom line by making products obsolete and requiring updates and new purchases, including technology that is incompatible with previous systems. Older persons do not always have the cognitive bandwidth, emotional patience or confidence, or financial resources to keep up with changes in digital products, especially when they do not have the necessary support to master the new devices. Providers of digital products should be required to keep some main ICT products in service with which older persons are familiar and ICT companies should abstain from continuous strategies of obsolescence in order to boost their business.

3. The ICT industry is dominated by an oligopoly of large firms (Microsoft, Apple, Facebook, and Amazon). Dominant ICT companies can exert inordinate pressure on suppliers and local vendors creating situations of monopsony. Local competition authorities should do their best to avoid situations where the ICT market is dominated by monopolies exerting monopsony influence on local providers leading to price increases and supply impasses, which are difficult for older persons to manage and who might not have financial resources to catch up with price hikes of the digital equipment they own [16].

4. The development of continuously upgraded new standards and new ICT technologies should be kept at a level that enables older persons to stay abreast of the rapid ICT technology changes so that they can still master ICT devices. Older persons should be given time to learn and update their skills and knowledge of digital devices at a user-friendly level. This goes hand-in-hand with a general requirement to have minimal transparency of ICT standards for all customers independent of their age.

5. Opportunities should be created by enterprises and community organizations for lifelong learning, and gainful participation in the labor market and in enterprise development during different stages of the life course, including for older persons beyond their retirement age. Being able to contribute to society and the economy is a valuable source of keeping high cognitive resilience, gaining financial revenues to markup pension funds, and supporting a sense of dignity [17].

6. ICT policy options to enable participation of older persons in society at large. To strengthen the voice of older persons and to give them a sense of control over their communications with other people, the following governance mechanisms should be provided for older persons at global, regional, national, and subnational levels also for older people from the global south and their communities namely: Public forums that offer ICT assistance to help older people cope with ICT devices and communication mechanisms [18]. For instance, public authorities should monitor older persons' ability and comfort when digital means are being used as public communication tools. Opinion surveys should be organized to keep track of how older people cope with ICT technologies and how much their digital literacy has evolved in regard to participation in public forums, discussions, and information sharing in general.

5.1 Limitations of this study and future research

This study was based on reviews of documents of key international organizations such as the WHO and the United Nations. Both international organizations' documents are based on extensive empirical research done by experts in the field of aging in many countries across the globe and are hence a good proxy for relevant empirical findings. Still, it would be beneficial to conduct further studies to validate the impact of digitalization as well as the relevance of the solutions proposed in this text.

6. Conclusion

Digital services and their accessibility and coverage should ensure that all persons who are affected by ICT technologies can enjoy and benefit from the availability of digital services no matter who, where, and when. This call is especially urgent to include older persons.

Inclusion of older people in the area of rapid digital development will require major efforts of stakeholder partnerships by private businesses, philanthropic organizations, civil society organizations, and governments, especially in resource-constrained countries and areas: Public spaces need to provide access to the internet and digital literacy education and training for older persons, as well as for young and adult persons in developing and least developed countries who remain deprived of internet access and ICT communication tools.

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