

Research Article

Older People and the Construction of Virtual Identities in the Digital Culture

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Abstract

This research study addresses certain theoretical issues surrounding the relationship between digital technologies, the aging population, and identity. At the same time, it offers a conceptual proposal of indicators of the social inclusion of older people in the digital culture of society as a potential starting point for further empirical research. The progressive trend of a growing proportion of older people is a demographic reality in many economically and technologically advanced societies. This demographic aging of populations raises several economic, sociopolitical, medical, cultural, social, and psychological issues. One of the most important and oft-overlooked sets of issues is the active participation of older people in the digital culture environment and the use of information and communication technologies as an alternative source of social interaction in constructing and affirming their own identity. Aging is often associated with a natural decline in professional activity, poorer health, reduced physical activity, reduced social contacts, and sometimes isolation and loneliness. The active participation of older people in the digital environment of communication and virtual interactions can buffer these negative factors to a certain extent and offer an adequate alternative for fulfilling the need for social relationships, self-actualization, and affirmation of identity. Of course, digital culture does have an ambivalent character. On the one hand, there



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are obvious positive effects on social life, subjective experience, and consciousness of one's own identity derived from real and virtual social interactions. On the other hand, digitalizing life generates unseen risks in invading an accelerated pace of life, superficiality, and the deepening of social inequalities.

Keywords

Digital culture; digital technologies; fast time; identity; older generation; online communication; self-confidence

1. Introduction

The aging of society in the contemporary world is a process that is hard to deny. The trend toward aging populations is particularly evident in regions of economically developed countries with high living standards and accelerated technological advancement. Demographic changes are causing major socioeconomic transformations. Pension systems in many European countries are severely overstretched. They are at risk of collapse due to the ever-increasing share of the economically unproductive population combined with a decline in the number of economically active members contributing to pension schemes. Under the baseline scenario of the latest population projections issued by Eurostat, the EU's population will continue to grow older. This can be illustrated by the old-age dependency ratio, defined as the ratio of the number of elderly people (aged 65 years and over) compared with the number of people of working age (15-64 years). "The EU's old-age dependency ratio is projected to be at 57% in 2100, almost double that of 2019 (31%). This means there will be fewer than two persons of working age for each elderly person aged 65 and over. The projected increase in old-age dependency ratio follows the trend observed in the past decade (26% in 2009)" [1].

According to some authors, the continuing trend of aging populations will require a much greater emphasis on innovative thinking, creativity, and the search for new, sometimes bold scientific and technological solutions to safeguard current and future living standards. Yet the question remains whether an aging population will have the intellectual potential for innovative thinking, the willingness to offer bold and original solutions to technological developments, and the potential to accept such solutions [2].

The population's aging trend is not simply a question of the economic sustainability of societies, the transformation of social policies, reforms of pension systems, a decline in living standards, or the slowing of future technological development. It is not only an existential issue in the content of the material and technological dimension of life, but also an existential issue in the cultural, social, psychological, and symbolic contexts of life.

In traditional and early industrial societies, old age was associated with the authority of a bearer of valuable life experience, wisdom, and life perspective. When the famous Czech writer Jaroslav Vrchlický (1853-1912) celebrated his fiftieth birthday in 1903, well-wishers addressed him as "old codger". It is hard to imagine a similar address for a contemporary fifty-somethings in the atmosphere of the cult of "eternal youth" and would likely be perceived as a provocation. In the era of late modern societies and increasing life expectancy, old age has been significantly quantified and

has become a normal part of social life. With this in mind, it is fitting to consider a phenomenon of "elderly inflation," whereby old age ceases to be the privilege of a select few but becomes a common social phenomenon [3]. At the same time, in a rapidly changing world of digital culture, robotization, and automation, the experiences of the elderly rapidly become obsolete, and for the younger generations of "digital natives," the life experiences of their parents and grandparents acquired and applied in the offline world often become uninteresting and practically inapplicable to the hybridized life of alternating online and offline living environments.

The growing proportion of the aging population is a potential for dramatic changes in social and cultural life, ways of everyday living, mutual communication, quality of interpersonal relationships, socialization practices, social role formation, or lifestyle transformations. An important circumstance of aging is recognizing the specific construction, maintenance, negotiation, and development of identity in the social space [4].

Among the most important forces influencing the life situation of older people in the late modern era is the penetration of new communication and information technologies into everyday life. Everyday life is closely intertwined with digitalization, computerization, robotization, automation, and artificial intelligence. Various technological tools and digital communication platforms are thus becoming important determinants of life. Unlike younger generations who have been naturally socialized into digital culture, the increasingly large aging generation faces the challenge of actively engaging in the technologized world of digital communication. Navigating such a world requires willingness, determination, and a certain level of digital literacy. The ability to use new information and communication technologies is a normal part of everyday life. Therefore, it is important to give the requisite attention to the aging population's potential and actual participation in the digital world, for whom barriers and limits can be assumed to exist when engaging in the institutionalized structures of the technological environment.

A review of the literature suggests that the aging population is gradually breaking down these barriers and successfully eliminating limits. They can adapt to the digital environment of life, quickly orient themselves in it, and gradually socialize within its specifications. Information and communication technologies help aging people in their life situation when they lose not only their life partners, but also part of their social contacts, which naturally diminish with age. Thus, the use of online environments can most likely compensate to some extent for the diminishing contact and relationships in the offline environment of social life in supporting emotional life, building self-confidence, and affirming one's own identity. According to Heide [5], the seniors' quality of life depends mainly on maintaining a lifelong identity. Digital communication technologies can contribute significantly to preserving identity and maintaining its integrity in the aging generation.

This study aims to make a theoretical contribution to the discourse on the participation of the aging population in the institutionalized structures of the digitalized culture of late modern society. It also seeks to specify the opportunities and limitations of such participation in constructing and reconstructing identities in the online environment. I will emphasize that virtual communication platforms are an important source of self-confidence as a basic prerequisite of identity construction. They represent an alternative world for maintaining and affirming the self-identity of an aging population, which in later stages of life is exposed to the very real threats of reduced physical contact, social isolation, and abandonment due to a decline in professional activities, loss of a partner, and not least the dispersal of family. The active participation of older people in the digital communication environment can buffer these factors to a certain extent and offer an adequate

alternative for fulfilling the need for social relationships, self-actualization, and affirmation of identity. At the same time, I support the thesis of the ambivalent character of activities in the digital environment, providing on the one hand the positive effects on social life and subjective experience, on the other hand generating unseen risks in the form of the invasion of an accelerated pace of life.

2. Materials and Methods

This study presents a theoretically based critical reflection on the social science discourse over the relationship between old age, identity, and the functions of digital technologies. In order to achieve the stated objectives, it employs a critical literature review and evaluation of selected monographs, reviews, and empirical studies, particularly from sociological schools of thought. Relevant scholarly sources were identified using the ProQuest and ProquestEbooks databases. The methodological framework is based on an attempt to create our theoretical platform of arguments, insights, critical perspectives, and opinions, challenging some stereotypically accepted approaches referencing the passive or incompetent relationship of the aging generation about new information and communication technologies. At the same time, I expose the ambivalent nature of the digitalization of culture and the technologization of life. The following theoretical conclusions can be developed and further verified through experimental studies and quantitative and qualitative research.

2.1 Digital Culture and Old Age

The role of the aging generation in the rapidly changing world of digital technologies and the penetration of ever-newer information communication platforms is a subject of interdisciplinary scientific inquiry. Demographic changes in society and accelerated technological developments prompt sociological thinking, for example, towards understanding the socialization processes of older people in the conditions of digital culture and the possibilities of their full participation in the world of technology. Psychologists often observe and analyze the psychological effects of cyberspace on mental experience and the cognitive potential of older people to actively handle the environment of technology. Economic and marketing-oriented studies often highlight the aging generation as an increasingly robust customer group and an attractive business segment of consumers actively using online shopping models. In turn, social and health perspectives often highlight the potential of technology for enhancing the quality of life in later life and fulfilling ideas of aging with dignity. The relevance of interest in understanding the relationship between the aging population and digital technologies is confirmed by other international research teams, who recognize the importance of connecting older people with modern technologies [6].

De Santis et al. [7] conducted an extensive meta-analysis of academic texts to understand how digital technologies can promote health and prevent disease.

According to the study's authors, this is because it is not yet clear whether and how these digital technologies address the health needs of older people in non-clinical settings (i.e., everyday life).

In an international comparative study, Lolich et al. [8] used empirical data collected in Finland and Ireland to compare the level and effectiveness of technology use in-home care by lonely older people.

Sriwisathiyakun and Dhamanitayakul [9] examined baseline data on the use of digital platforms by the elderly in the Bangkok metropolitan area and in six regions of Thailand. Based on the

empirical data, they developed a specific chatbot containing instructional media and a service function that served as a platform to enhance the digital literacy of seniors in Thailand.

McGinley et al. [10] discuss the transformations in design and the problem of designing digital technologies by designers in such a way as to adopt the social model of aging and develop a participatory and empathetic approach. Their paper concludes by looking at digital technology design through the lens of friendly and dignified design about old age.

Viñarás Abad et al. [11] focused on a sample of elderly people between 60 and 79 years old in Spain to investigate their consumption behavior, motivations, and shopping patterns about online shopping. They arrived at an interesting typology of different consumer types and an understanding of the mentality of older people in the online shopping environment, which they approach with awareness of their digital competence and ability to navigate well in such an environment.

A similarly focused scientific study is presented by Rybaczewska and Sparks [12].

In this study, the research focused on the consumer behavior of older people on the Internet. Using representative data of older generation consumers in Scotland, the authors confirmed a statistical relationship between age (but also marital status) and type of consumer behavior during online shopping.

Living with digital technologies generally implies partial changes in thinking and the acquisition of new competencies, knowledge, and cognitive skills. Authors Stiakakis and Barboutidis [13] have even developed a construct of digital intelligence.

It is clear, then, that the integration of the older generation into the world of digital technologies is taking place at different levels and with varying intensity. Older people socialize in these conditions, whether as active participants, purposefully and willingly using digital technologies, or as more or less passive users. In any case, digital technologies have become part of their life experience and an important socializing factor. They penetrate the processes of identity formation at various intensity levels in the different dimensions of their lives.

2.2 Identity as a Work of Art

Human identity represents a universal quality negotiated and affirmed in social relations. In other words, it is an identity that is fundamentally de-essentialized and deterritorialized, emerging and disappearing in a social space that includes different opinions, values, beliefs, and goals [14]. The construction of identities is based on the resources of history, geography, biology, collective memory, one's fantasies, the apparatus of power, and religious beliefs [15]. Identity here does not constitute a stable and unchanging entity, but rather represents a process of change and transformation. Identity can therefore be understood as a verb rather than a noun. Identity is not a permanent state; it is formed as a discursive practice and becomes a process of continuous negotiation and affirmation [16].

The fundamental starting point here is an initial rejection of identity characterized by any predetermined substance, attribute, or property representing an original and unchanging basis.

Identity is thus understood in social science discourse as mutable, constructed knowledge about others and ourselves, rather than as a timeless essence. Thus, identity is not discovered as a pre-existing quality but is instead composed through producing understanding. Namely social understanding in the real and virtual world of digital interactions. It is characterized by its relationality to the social and cultural contexts where it is simultaneously formed, clarified, affirmed,

and questioned. Identity is not a fixed and unproblematic given, either of a particular or universal character. Rather it presents as a set of different, temporal and situation-dependent relationships that express its fundamentally non-static character.

In the context of a constructivist understanding of human identity, we can thus understand Bauman's [17] reflections on human life as a work of art, the result of which is indeed that very identity.

Just as a painter stands in front of a white canvas, a sculptor in front of a pile of clay, or a writer in front of an unwritten sheet of paper to create something meaningful, communicable, and unique, so too do we, the artists of life, stand in the situation of having to create ourselves in such a way that the result satisfies our inner desire to be authentic, unique, and understandable to ourselves and to those around us. Creating one's identity depends on one's social environment and specific relationships with others. It is in social interactions that identity is affirmed through its constant construction and reconstruction.

The problem aging people face is that their social environment often changes radically in the later stages of life. The end of an economically productive life, retirement, the decline of professional activities and loss of professional ties, physical separation from the family, or the physical loss of a partner, all these and more represent critical moments for maintaining and developing an integrated and comprehensible form of identity, dependent on regular social interactions. It is the increasing likelihood of loneliness in old age, whether due to the death of a partner or divorce, that becomes a source of self-doubt, an element of uncertainty in understanding one's social role and the concurrent centrifugal force on personal integrity and self-concept [18].

Retirement can be identified with a loss of professional identity and purpose in life. Retirement age represents another challenging stage of socialization in the new socioeconomic conditions of life, including psychological adaptation in the subjective world of experience. There is a search for new forms of self-realization and fulfillment in life.

The problem of questioning the professional identity of the aging population and feelings of loneliness and isolation and various forms of detachment from their social circle of physical contact can be adequately compensated with the help of information and communication technologies. In such a situation of loneliness, virtual contacts are a functional starting point and a way of meeting people's social and emotional needs, including the potential to develop certain skills and competencies in the virtual world. Numerous scientific studies have confirmed this.

The importance and creation of digital identities on social networking platforms are analyzed by Papaioannou et al. [19]. Here digital identities are not experienced by subjects as identities parallel to the offline world of physical contacts, but freely map out and co-create a complex identity, formed in a hybrid fashion at the interface between the virtual world and the world of physical everyday life. Latikka et al. [20] state that loneliness and social isolation can seriously impact human health and well-being.

According to these authors, information and communication technology represent a partial solution to combat these circumstances in demographically aging societies. In this study, the authors gathered sufficient empirical evidence on how technology can help overcome loneliness and social isolation. Gil-Clavel et al. [21] found in a qualitative study that the use of information and communication technologies is associated with a higher quality of life for older people because these technologies can act as a means of accessing social capital regardless of geographical distance. Social capital, in the form of creating and actively maintaining digital networks of contacts and

relationships with other people, is an important source of self-concept, and self-confidence. And the affirmation of one's identity.

De Andrade et al. [22] observed in a population of older people in South Africa the psychological effects of international migration in recent years on single older parents who stayed at home without other family members. The authors identified feelings of loss, isolation, and sadness in the population of parents. At the same time, however, there was evidence of the importance of information and communication technologies in maintaining contact with other family members separated by migrations. Here digital forms of communication enable virtual coexistence to be experienced despite geographical separation.

The involvement of the older population in digital communication constitutes part of their socialization, responding to changes in their life situation. They use communication applications such as WhatsApp, social networks, and chat rooms, actively blog, and last but not least, take online courses at universities with continuing education programs. Older people's activities in the digitized virtual communication environment are an important part of their social life; they represent an opportunity for self-realization and help them understand who they are.

2.3 Self-Confidence and Self-Concept in Digital Communication Environments

Older people may experience activities in digital communication channels as an integral part of their social existence, transforming socialization and psychological changes. With the help of information and communication technologies, they can develop and maintain social interactions, obtain information conveniently and quickly, educate themselves, entertain themselves, and actualize themselves in various ways. What is not only typical for the older generation, but in principle for all people, regardless of age, is that social activities in the online environment are important for forming one's subjectivity, they present sources of self-knowledge and often social recognition. It should be added that self-confidence is a complementary part of self-knowledge as a central prerequisite of constructing and reconstructing identity. When an individual lacks self-confidence, he or she can hardly strive for an integrated self and possess a comprehensible and meaningful identity. The source of this self-confidence is a broad platform of life activities in family and partner life, profession, hobbies, and other forms of self-actualization. If as a result of aging this platform of life activities is disturbed, restricted, and subjected to changes that inhibit these activities, self-confidence may be eroded and the continuity of self-identity formation questioned. What might be limiting for old age in the offline world of physical contact and self-realization might not be in the online environment of virtual interactions. Self-confidence can therefore be sought and adequately developed in the alternative environment of digital communications, which enables rapid interconnection, convenient access to information, shopping, education, sharing of opinions and experiences, participation in discussion forums, etc. It is possible to compensate for various physical limitations, health problems, loneliness, and other similar manifestations of old age by increasing participation in digital communication platforms and using information technologies to meet social and psychological needs. Moreover, in a late-modern society dominated by an emphasis on speed of change, flexibility, mobility, work performance outcomes, competitiveness, and infatuation with the cult of youth, it is much more difficult for the aging generation to assert themselves and gain much-needed recognition and respect from others. For example, older people can connect with family and friends, share similar life experiences and stories, and form virtual

groups with similar interests, attitudes, or paths through social networking sites. In such virtual communities, they can find the much-needed understanding and appreciation that may elude them offline. They can find other identifying relationships with their surroundings and affirm their own identity in different dimensions of life.

Older people's relationship with the digital communication and social media environment is likely to be ambivalent. On one hand, the online environment can be an effective alternative for meeting social and psychological needs; on the other, it is a place filled with feelings of mistrust and misunderstanding. For example, the character of social networking sites can make the older generation skeptical and reluctant to participate in these platforms. What is attractive to younger generations may not be attractive to older generations. Social networks resemble a swift foaming river, a multi-lane highway with so many shouting voices, so many faces, so many characters, so many stories that one can easily drown in oblivion as each participant presents their own life, their photograph, their own desired image, their own story, with each trying to shout down the others, to put on their best face. Parallel to this, various intimacies of life and detailed moments of one's privacy, traditionally rather protected and left out of the public eye, appear in high concentrations on social media, which may cause misunderstanding among the older population. With incredible honesty, directness, and perhaps even naivety, many narcissistically display their photographs or videos, capturing situations from their lives, from the banalest moments of everyday life to various sensational details, from the most curious actions to the juiciest personal experiences. Would all this be possible if their users did not trust internet communication, blogs, and social networks? After all, aren't they relying on their miraculous healing powers to free them from uncomfortable feelings of insecurity, to lead them out of the invisibility and fluidity of their self-concept, which needs regular doses of recognition and affirmation from the social environment for the sake of its reinforcement and comprehensibility?

What is bizarre here is not just the range of communication content itself, but the form of communication as such, anonymized and technically mediated and produced, lacking the essential qualities of personal contact, providing a complex of immediate feedback and corrections of a verbal and non-verbal nature. Anyone can move and assert themselves in the digital space; in the reality of the offline world, only those can cope with the far more challenging conditions and circumstances of the functioning of personal relationships, which requires far more than merely mastering a computer keyboard. This could be the argument of the older generation, socialized for most of their lives outside virtual communication and having formed social competencies in the traditional sphere of personal contact. This interpretation of social networking communication platforms that may discourage older people and leave them believing authentic and fulfilling social contact can only be found outside the virtual world.

2.4 The Digitalization of Life and the Risk of the Invasion of Fast Time

In the digital age of globally functioning information and communication technologies, there is a case for the perceived opposition of "slow" and "fast" time. In this opposition, we can see a parallel relationship between old and young: a generation socialized predominantly outside the world of digital technologies and a generation of digital natives firmly embedded in a digitized culture. We can also distinguish between slow and fast media. That is, media that produce information or knowledge more slowly but are verified and therefore more reliable and generate rapid flows of

large volumes of unverified and only rarely reliable information. Meanwhile, slow time in digital culture can be interpreted in the context of patience, diligence, discernment, or verification. Fast time is a phenomenon of constant change, flexibility and movement, of impulses and effects, of acts and actions, of events and changing situations, where past, present, and future are lost in the impulses of instances. Paul Roberts analytically elaborated the concept of fast time in his sociological concept of the "impulsive society." It authentically captures the socioeconomic and cultural transformations of modern society, the escalation of consumer hedonism and self-centeredness and the increasingly evident promotion of a system of quick rewards, profits, immediacy, urgency, short-sightedness, and volatility, permeating not only the practices of everyday life, but also the system of functioning of institutional life, resigned to a longer-term vision and agenda for the sustainability of the quality of life of future generations [23].

Eriksen's social anthropological perspective is also interesting as it contributes to the discourse of late modernity through the lens of the advent of the digital era, in which fast time, represented by the young generation, is set to triumph, exerting a significant influence mainly on lifestyle changes, but also in the perception of time [24]. The decisive factor in these changes is the incredible amount of information that fills more and more space and from which there are almost no reliable shelters anymore. Information is becoming more and more abundant and accessible. It threatens to turn lives into a hysterical sequence of overflowing moments where the distinction between "before" and "after" disappears, where the boundaries between "here" and "there" vanish. Each successive moment then comes with such speed that it will probably become increasingly difficult to live even in the present. According to Eriksen, the consequences of the extreme haste of modern life are quite fundamental, for the "tyranny of the moment," as Eriksen terms the atmosphere or ethos of our time, is not only to threaten the categories of past and future time directly but also to transform the mental categories of all those who are ruthlessly oppressed by the tyranny of the moment in the information age. With all its negative consequences, the remorseless invasion of fast time will also affect the older generation, the least prepared and most vulnerable to these changes. According to Eriksen, the dictatorship of the moment will represent a new paradigm in the form of a set of rules that threatens to dominate contemporary culture and completely dominate the ability to control one's own time. It will make people the victims of information overload, and the increasingly intense and aggressive imposition of information will lead to a struggle for every spare second of life.

The aggressive and reckless displacement of the "slow" by the "fast" is problematic in many areas of life. These are spheres of life where slow time is an essential condition for the existence of something important for the quality of life: the preservation of traditions, customs, and norms. The value worlds of older people are now unexpectedly confronted with a world of rapid change, demands for increased mobility, and constant flexibility. Older people are also adopting new formats of communication in such conditions. One example is electronic mail, which is characterized by a unique sentence structure and writing style, most likely resembling a hybrid form of written and oral communication, as a style for communicating information can seem bizarre to the oldest generation, which has completed classic education. Its modes of address are often informal, incomplete, or altogether lacking, its fragmented statements, incomplete sentences, and illogical sentence structure result from the same speed with which we use this form of communication. It is also the result of the quantity of information we distribute and receive. While senders of information compete for every moment of their target audience's free time, receivers of

information are increasingly forced to sort through a flood of digital data, assess its relevance and urgency, decide on its importance, and ignore some of it altogether. Email correspondence has unleashed a struggle between senders for every spare second of recipients' attention. On the other hand, it has put these recipients to a severe test of their ability to organize information. Recipients and senders are the same groups of Internet users; these roles are intertwined and essentially indistinguishable from each other.

Email messages, unlike traditional letters, can also be used for multiple recipients simultaneously, where the generally impersonal and vague content of the communication is intended for "everyone and no one." Composing a letter and sending it differ significantly from writing an email and clicking the button of a mouse. The same applies to the recipient: Reading a letter is a different experience from reading an email. Letters usually require more effort and personal engagement than a regular email. Letters are generally few and far between in a fast-paced environment, requiring time, patience, and preparation, compared to the short and often disjointed messages sent electronically. The difference between a letter and an email is the same as between a pipe and a cigarette. The pipe is a symbol of slow time, of old age, of discernment and perhaps even of wisdom; it burns slowly and is usually enjoyed in the quiet of the home, delaying as much as possible the moment when the tobacco burns out, as it is very difficult to smoke a pipe and hurry at the same time. On the other hand, the cigarette represents the fast time of haste, youth, smoked dynamically with a rapid frequency of inhalations and exhalations of smoke, often while walking, in the presence of others and willingly watching the cigarette grow quickly shorter. Metaphorically speaking, the age of pipes and letters has given way to the age of cigarettes and emails. And yet even cigarettes are electronic now.

It's interesting to note how the fast time dominating the world of communication is also gradually disrupting even time that was relatively plentiful in the days when it took some time for information to get from sender to recipient. This time, which filled the now almost non-existent space required for the transmission of data and information, can be categorized as slow time. It is this "no one's time" that we are missing today, but no one is consciously looking for it, no one is missing it, it has simply ceased to exist for many people. The point is that we have certainly deprived ourselves of this time through the overuse of email, text messaging, and social networks. We have voluntarily, and in some cases even enthusiastically, reduced to a minimum the time that can be used for a meaningful activity that is not compromised by the risk of an immediate reaction from the recipient, triggering a compulsive need for an equally quick response. As a result of rapid email communication, the time for reflection and deliberation that should be available for any lengthy serious response has been condensed to the greatest possible extent. Email communication often forces us to respond in mere seconds and minutes, which certainly leads to the superficiality of many instances of this form of communication. At the same time, it knows no spatial constraints: digital communication has perfectly tamed the space and its users moving ever faster in that space. Emails do not knock on doors and wait in mailboxes, they do not wait for an invitation. They usurp the attention of their recipients while they are on the move, wherever and whenever, regardless of time zone or day and night. They do not allow space to be created for idleness, nor perhaps for time to be as pleasant. The time of downtime and breaks is disappearing in the environs of the world of online digital communication.

Digital communication can be seen as a symbol of the tyranny of the moment, reinforcing the atmosphere of fast time, where preserving slow time is difficult to imagine and probably impossible.

But the question remains whether the lack of slow time is felt at all, whether there is a more general will to return to slower versions of time. And there is nothing left but to think about who would be served by any downtime or the delays of slow time, who could benefit from them, and who could even profit from them.

Erikson's concept of the tyranny of the moment may have the strongest psychological and social impact on the current generation of older people, who were not confronted with digital technologies and the speed at which information flows during the productive phase of their lives. The constant innovation and modernization of digital applications require an ever-increasing degree of flexibility and digital literacy, which may further complicate the adaptation of older people to the digital environment.

3. Indicators of Digital Inclusion and Multigenerational Development of Digital Culture

We reiterate that digital technologies are important to creating and maintaining human identity. They penetrate everyday life, subjective experience, and routine activities. They contribute significantly to self-concept and form an important component of the complex resources for constructing and reconstructing one's identity. This applies specifically to a generation of aging population gradually limiting their professional activities, reducing their social interactions (often involuntarily), and not least experiencing a deteriorating state of health. In such a situation, digital technologies represent a possible starting point for dealing with the changing life situation, keeping active, contributing to better mental and physical health, maintaining the necessary social relationships, and building self-esteem based on mastering new digital competences.

We have noted that digital technologies are also distinguished by their ambivalent character, on the one hand facilitating social interactions and serving as sources of entertainment, self-exploration, or education, yet on the other generating invisible risks in the form of an accelerated pace of life, for example, or a decline in real social contact in favor of the virtual. Material here is that digital technologies are a potential source of deepening social and economic inequalities and pose the threat of new forms of social exclusion and marginalization of certain social groups. Threats associated with the digital divide are further intensified by the growing social and cultural importance of digital technologies and their penetration into an ever wider space of life activities. Generational disengagement from the world of communication technologies and the internet, whether voluntary or involuntary, is likely not only to intensify and deepen existing social and economic inequalities in society, but also to create inequalities in a newly increasingly technologized and digitally dependent society. Individuals forming excluded groups are at much greater risk of being socially marginalized, thereby calling into question the foundations of their identity. In the Czech Republic, for example, only 66% of individuals in the 55+ generation used the internet regularly in 2022. Unemployed retirees spent an average of just 674 minutes on the Internet per week, compared to 1,836 minutes for those working or studying [25].

Therefore, support for an inclusive information society has received considerable research attention in recent decades [26].

In the next section, we present our theoretical model of possible universal indicators of digital inclusion. This can be compared with other still current empirical models of the social divide framing the problem of the digital inclusion of an aging population [27-29].

3.1 Informedness

Older people should be more informed about the nature and purpose of digital technologies and their practical use, utility, benefits, affordability, and overall relevance in everyday life. Particularly in the case of the internet, the aging population should be informed about its scope, possibilities, opportunities, security, and benefits in everyday life. Informedness should also motivate users to use the internet outside the home, for example, and specifically towards what is referred to as "third places," i.e., cafés, libraries, and other publicly shared places for socializing with each other. Greater informedness can eliminate many negative stereotypes associated with older age and the ability to adopt digital competencies and erode conservative resistance to change. At the same time, informedness can potentially suppress a priori "technophobic" attitudes, often based on a lack of information and fear of the unknown. Informedness has the potential to break down the barriers of negative stereotypes and change attitudes towards a greater willingness to take an active role about new technologies. The primary group of family and close friends is likely to be an informal source of this information; the flow of information can be formalized through government policy on educational campaigns, workshops, lectures, or the educational events of non-profit organizations.

3.2 Attitudes

Digital technology is not a culturally neutral value. As such, it gives rise to both positive and negative attitudes and provokes a variety of intense emotions motivating the acceptance or rejection of the digital environment to varying degrees of intensity. Of course, this is also related to the level of informedness, which influences the quality of attitudes. Negative attitudes towards adopting digital technologies, or even "technophobic" views, represent a significant psychological barrier and can seriously cause social exclusion and deepening inequalities in socio-economic status. Identifying such attitudes in the older population and seeking to change them in targeted ways is essential. The greatest potential for such a change of attitude is likely in the immediate environment and relationships of love and trust. Attitudes are universally influenced by intrinsic and extrinsic motivations related to awareness of its convenience, utility, safety and risk, meaning, practical benefit, affordability, or technical complexity. Extrinsic motivations are generally moderated by practical, purpose-oriented, and instrumental reasons. For example, the Internet can be used for booking vacations, managing bank accounts, and, last but not least, shopping. Mobile communication devices, for their part, can usefully support medical care in the form of mobile health (mHealth) [30].

Intrinsic motivation is determined by curiosity, imagination, creativity, and the desire to learn, improve, and develop. Therefore, older people should perceive the Internet as convenient, relevant, practical, and useful, but also as an experimental and educational platform for personal development, entertainment, and pleasure. They should let go of fear and realize that what they lack is not so much digital competence as digital confidence.

3.3 Social Capital

Digital communication platforms function as parallel worlds of virtual interactions and social relationships. In the case of an aging population, these communication platforms often become increasingly important for sustaining social life. They saturate social needs in areas where the world

of physical interactions is involuntarily constrained and supplanted for various reasons related to aging by the world of virtual relationships. Social capital in the form of family relationships and wider social networks of friends and acquaintances serve as an important motive for supporting and assisting active engagement in the digital world. The social support of family and close friends relieves potential fears and anxieties about technology, boosting confidence and determination. At the same time, family represents direct technical and, in some cases, financial support. Family and friends are a strong motivation for accepting the communication platforms of applications, where they enable overcoming physical isolation, exclusion, or greater distances separating family members. The motive of maintaining and developing social capital often drives the participation of older generations in the digital environment, and the family plays an crucial role here as a source of support mechanisms. The problem is that similar social support from families and friends is not universally available. Sometimes this motive is simply lacking, which can negatively contribute to the active participation of some older people in the structures of digital culture.

3.4 Technical Competencies

The lack of confidence of aging people may be a bigger problem than their digital competence and technical skills. The operation of digital elements is often very intuitive, simple, and direct, and does not require specific skills to manage basic functions. Examples include the communication platforms WhatsApp or Skype. We can assume that some objective limitations to these competencies may occur due to various health limitations associated with aging. These include physiological reasons, neurodegenerative diseases, and tremors or fine motor disorders that limit mouse movements and complicate keyboard control. In such cases, technical support and help are needed from other family members, a partner, or friends.

4. Discussion

Many economic, social, and cultural aspects of life occur in the digitized world of impulses in an anonymous environment representing new forms of parallel coexisting realities of different acts, actions, and events. At the same time, other institutionalized elements of the culture of societies are becoming part of a hybridized complex reality of parallel worlds of both physically and virtually mediated interactions. Some authors have argued that digitally shaped and shared realities are becoming less and less clear and comprehensible as a result of the increasing volumes of often contradictory information, data, symbols, and stimuli, subordinated to the imperative of the unprecedented speed of their technical generation and sharing, which may reinforce tendencies toward a hurried and hectic way of life with the aid of extensive consumerism and hedonistic consumption. We have more information, but understand the world less [31].

The threat posed by the digitalization of lives and the concentration of social interactions in virtual environments is increased not only disorientation and superficial acceleration of life events but also the formation of new social inequalities. Participation in a technological and digitally determined life presupposes specific competencies and digital intelligence. According to Adamczyk and Betlej [32], the persistence of various exogenous factors and endogenous barriers in the older population may gradually lead to their digital exclusion, marginalization of their social status, and questioning of the importance of their full role in society.

New forms of social inequalities may thus develop in technologically advanced societies, caused by the different levels of participation of different age groups in a technologized world.

In this context, we offer a theoretical model of indicators of digital inclusion of the elderly population in the digital cultural environment of modern societies. We assume that this inclusion of the aging population can be supported by increased and more effective awareness, attitude change, social capital potential, and technical competence. A limitation of this model is its theoretical and to some extent hypothetical profile, which will additionally require more detailed empirical validation. At the same time, another limitation exists in the typology of the proposed indicators, which may operate in other forms and types. Other indicators may emerge, such as the specific features of a cultural environment and other socialization and enculturation attributes.

At the same time, optimistic scenarios are associated with developing information and communication technologies. , This process in the "*second machine age*" era orients towards greater abundance and the extraction of greater production volumes from fewer resources [33].

Abundance is represented not only by more cheap goods, but also by greater choice and variety and higher quality in many areas of life. The construction of virtual identities is a normal part of life. There is to be a seamless merging of these identities with those formed in physical relationships.

The question remains whether the concept of a "*second machine age*" is more a reference to prosperity, abundance, a steady and desirable increase in the efficiency of human work, increasing education, the introduction of more opportunities for the development of creativity and interactive work, and further emancipation of freedoms, authenticity, and independence. Or, on the contrary, to the path of the degradation of humanity [34] and its fundamental transformation into the universal anonymity of the digital forms of cloud existence of the virtual world of the "matrix."

In such a world, will there still be room for human emotions, empathy, and spontaneity, or will we be left with robotic sex or at best an addiction to internet pornography? Will there not be mobile applications, if their development has not already started in the technology centers of artificial intelligence companies, designed to establish partnerships and sexually digitalized relationships, like in the film *Her*? Will we then still crave the human touch? Won't the "Proteus Effect" come into full force, as a permanent adaptation of real-life humans to their digital representations? Will such a world even be real? Will this reality eventually become merely virtual or will the virtual one become real? Will there still be a difference between online and offline communication or are there other alternative scenarios of future evolution?

5. Conclusions

Population aging is a significant feature of economically and technologically advanced societies. The economic, social, cultural, and political spheres of life are undergoing unprecedented changes due to accelerated technological developments in digitalization, robotization, and automation. For this reason, more and more human actions and activities are therefore being transformed against the background of these changes and adapted to the conditions of life in a digitalized world. However, this adaptation does not occur simultaneously for everyone and requires different levels of competence and digital intelligence. It is also becoming a source of new social inequalities. It generates the potential for new forms of social exclusion, especially in the population of older generations socialized in the conventional conditions of a life of physical interaction. In some cultural areas, the older generation is stereotyped as "digital immigrants," which implies a more

complicated relationship with the control and use of digital technologies than the "digital natives" generation. In this context, we have attempted to draft a theoretical model of indicators of digital inclusion as a possible starting point for further empirical investigation. We recommend using quantitative and qualitative methods to focus on the extent, degree, sources, availability, and formats of informedness in the older generation regarding the nature and areas of use of digital technologies. For that matter, the qualities of the attitudes of the older generation, specifically the cognitive and emotional components of these attitudes towards the digital environment. At the same time, the dimension of social capital should also be studied as a source of support and assistance for active (not just formal) and effective engagement in digital culture. It is important to identify and assess the technical competences and physical and mental capabilities of older users to operate digital devices, as determined by aging.

The participation of older people in a technological and digital environment is important and is actively happening to varying degrees. Aging brings many changes and leads people to new experiences and life situations. It requires socialization efforts to adapt to changes such as decreased professional activities, reduced social contact, poorer health, and reduced activity. It has been shown that digital technologies, information, and communication platforms represent functional tools for managing a high quality of aging, enabling social interaction, self-realization, and access to education and entertainment. Communication technologies in particular are becoming a specifically important attribute for maintaining the continuity of one's own identity, for which the resources needed for building and developing it can gradually dry up in everyday life, whether through retirement, weakening of professional identity, reduced activity in the area of interests and hobbies, loss of a partner, separation from other family members, etc.

The digitalization of life is often attributed to an ambivalent character, full of paradoxes, conflicts, and contradictions. On the one hand, technology can represent progress and the emancipation of individual freedoms and act as a source of hope for a better future, the improvement of humanity, the enhancement of quality of life in old age, and the enrichment and development of social and emotional life. On the other hand, digital technologies can potentially dehumanize forces of control and lack of freedom, disintegrating elements both psychologically and socially. They can be a source of new forms of social inequality, shaming, ostracizing, and marginalizing of the most vulnerable groups of the oldest generation.

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Competing Interests

The authors have declared that no competing interests exist.

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