THE ACCIDENTAL "AGE-FRIENDLY CITY": PUBLIC EXPECTATION AND SUBJECTIVE EXPERIENCE IN SÃO PAULO

Marília Duque

Programa de Pós-Graduação em Comunicação e Práticas de Consumo, Escola Superior de Propaganda e Marketing, São Paulo, Brazil

Adriana Lima de Oliveira

Programa de Pós-Graduação em Comunicação e Práticas de Consumo, Escola Superior de Propaganda e Marketing, São Paulo, Brazil

ABSTRACT

Two optimisation projects, globally promoted, aim to respond to the challenges of contemporary urban life. The first one is *Smart Cities*, structured from a technological and informational apparatus that aims to make the city more efficient. The second one is *Age-Friendly Cities*, conceived to adapt urban environments to enable active ageing. Both projects are shaped in the neoliberal system as emancipatory proposals to empower citizens for participatory citizenship in the city. This article proposes that smart cities demand new skills for active ageing, causing challenges for age-friendly cities regarding digital inclusion and digital literacy. Bringing this discussion into the Brazilian context, we propose that for the elderly, none of these projects is wholly carried out. However, from an ethnographic perspective, we have mapped how a group of older adults in São Paulo builds their own informational network (centred on WhatsApp), enabling participatory and belonging instances from a perspective that comes "from below". From this mismatch between urban projects and experience, we point to the emergence of an accidental city that is informally smart and age-friendly.

KEYWORDS

smart cities, active ageing, digital divide, citizenship, accidental city

A "Cidade Amiga do Idoso" Acidental: Expetativa Pública e Experiência Subjetiva em São Paulo

Resumo

Dois projetos de otimização, promovidos globalmente, visam responder aos desafios da vida urbana na contemporaneidade. O primeiro é o das *Cidades Inteligentes*, estruturadas a partir de um aparato tecnológico e informacional que passa a mediar a gestão da cidade, seu consumo e eficiência. O segundo é o das *Cidades Amigas do Idoso*, estruturadas a partir de ambientes que visam capacitar o crescente contingente idoso para o envelhecimento ativo na cidade. Moldados em um sistema neoliberal, ambos os projetos se apresentam como instâncias emancipadoras do cidadão para o exercício de uma cidadania participativa. Este artigo propõe que as cidades inteligentes demandem novas competências para o envelhecimento ativo na cidade, resultando em desafios para as cidades amigas do idoso no que toca à exclusão e literacia digital. Situando essa discussão no contexto brasileiro, propomos que para os idosos nem um projeto nem outro se

realiza integralmente. Entretanto, a partir de uma perspectiva etnográfica, mapeamos como um grupo de idosos de São Paulo constrói uma rede informacional própria, centrada no WhatsApp, que viabiliza instâncias participativas e de pertencimento a partir de uma perspectiva "de baixo". É nesse descompasso entre projeto e experiência urbanos que apontamos para a emergência de uma cidade acidental, informal, mas inteligente e amiga do idoso.

PALAVRAS-CHAVE

cidades inteligentes, envelhecimento ativo, exclusão digital, cidadania, cidade acidental

1. Introduction

Population ageing and urbanisation are phenomena that marked the 20th century. The World Health Organization (WHO) considers the relationship between them as one of the great challenges for the 21st century (World Health Organization, 2007). The fact that these issues are approached as a health matter is explained by the demand for cities to adapt to the needs of that population in order to provide a type of ageing that enables the citizens to age actively, which means ageing safely and healthily taking part in society. Therefore, the objective is to promote a healthy and productive life extended to old age. However, its output is not the well-being of the elderly alone. The recovery of their productive capacity would benefit the entire society. The demand for elderly people to remain as a resource to society and its consequences for old age should be taken as a consequence of two historical processes. Accentuated in the 1980s, both reflect the decline of the welfare state and the emergence of neoliberal societies, where citizens become responsible for managing their own needs (Dardot & Laval, 2009/2016).

The first process concerns the "internalisation of self-responsibility" regarding one's health (Schramm, 2009) when maintaining autonomy is mandatory for social inclusion and citizenship. The individual is expected to assume the position of an active State partner to build a healthy nation (Rose, 2001). From the standardisation of conducts considered a virtue emerges a biocitizen, functional and independent of the state (Rose & Novas, 2007). This demand requires mechanisms and discourses that operate on the moralisation of health and put the citizens under administration until the individuals internalise the duty to become the entrepreneur of their own health.

The second process is the construction of old age as a social problem. In this sense, old age is targeted as an obstacle to economic development due to exacerbated health demands and expenses related to retirement (Debert, 1997). The United Nations Vienna plan (United Nations, 1983), recognised as the first international instrument for policies on ageing, is also a landmark for framing the elderly population as a burden or a risk to the development of nations and the "new order". This perspective was reviewed almost 2 decades later, in the Madrid plan (United Nations, 2002), when the third age emerged as a potential resource for society (already in the role of protagonists in the ageing process).

This shift implies a redistribution of responsibilities characteristic of neoliberal politics. While it is up to society to create opportunities for active ageing, the state — in the management of old age — assumes what Rose (2001) proposes to be a role of "facilitator" or "animator". The individual would be then responsible for maintaining their autonomy and productivity, exempting the state and society. Adopting healthy habits would make it possible, an expectation supported by scientific research that attests that ageing in a healthy, autonomous, participatory, and productive way is a matter of individual choice (Rowe & Kahn, 1997). These outputs are taken as virtuous, shaping the image of the active third age, the object of the *Active Ageing: A Policy Framework* (World Health Organization, 2002), proposed by the WHO in 2002 — the same year of the publication of the Madrid plan (United Nations, 2002).

On the one hand, the active third ager is also a biocitizen (Duque, 2021a). On the other hand, every biocitizen should be born under the active ageing paradigm once the need to manage one's health and ageing in a preventive way starts to encompass all ages. However, this inclusive character of all generations in a virtuous project of old age needs to recognise that the elderly citizen has specific demands related to ageing. The *Global Age-friendly Cities: A Guide* — published by the WHO in 2007 (World Health Organization, 2007) — aims to respond precisely to these demands. The age-friendly city adapts its structures and services to enable active ageing. In other words, the age-friendly city creates opportunities or "enabling environments" — a term used in the Madrid plan (United Nations, 2002). In this sense, all citizens, including the elderly, can age actively, being participative and taking care of their health to remain a resource for society.

For this purpose, the *Age-friendly City* project chooses eight aspects of urban life: open spaces and buildings; transport; housing; social participation; respect and social inclusion; civic participation and employment; communication and information; and community support and health services. As the document highlights, these eight aspects are interconnected and affect each other. However, transport, communication and information play a central role in enabling active ageing in the city. Without communication and information, it is not possible to know where the opportunities for elderly people are. Without transportation, access to those opportunities is unfeasible.

This article explores the centrality of communication in participation and consumption in the city. The focus is the digitisation and connectivity (of information and services) that structure everyday life in the urban context and its effects on ageing. Therefore, we consider the interaction between the *Age-friendly City* and the *Smart Cities* projects. We argue that technology, still little addressed in the protocol of the age-friendly city, becomes a condition for life in the city and the exercise of citizenship in smart cities. Therefore, this technological and informational infrastructure demands new skills to move around the city and consume it, resulting in the exclusion of elderly people. For this analysis, focused on the Brazilian context, we have structured the article in three parts. In the first part, we address the concept of smart cities and investigate the literacies needed to live in these cities. In the second part, we discuss the barriers to adopting new technologies

by elderly people. Finally, in the third, we present the experience of a group of older adults in the city of São Paulo, analysing how they use technology to optimise the experience of active ageing in the city, in an unpredictable way. From this ethnographic observation, we verify the occurrence of a third city, an accidental city (Vielma, 2016), where participants recreate an intelligent and friendly city in their own way.

2. SMART CITIES: FOR WHOM?

The discourse on smart cities goes back to city mobility (Lemos, 2007). In this sense, the relationship between urban space and communicational forms undergoes essential transformations in the current phase of the information society. The origin of this discourse is present in the reorientation of large companies, such as IBM, especially concerning the need for optimisation in both the public and private sectors (Morozov & Bria, 2018/2019). Different financing initiatives and investments in implementation and research projects, urbanisation strategies and projects related to the future of cities place the city-technology axis on the urban agenda through the smart city concept. This social imaginary combines different tech-cultural discourses, encompassing ideas such as robotisation, big data, and the internet of things.

Considering that one of the biggest challenges in the coming decades is dealing with a growing and irregular global urbanisation, corporate digital solutions emerge as catalysts for changes capable of altering the course of society. As a result, technology companies found great potential customers in state and municipal administrations. These companies have appropriated the term "smart" to describe the city and promote their products and services. This scenario becomes even more relevant when we observe that the smart cities market should move \$2,100,000,000 by 2024 ("Cidades Inteligentes: Mercado Deve Movimentar US\$ 2,1 Trilhões Até 2024", 2021), extending to fields such as governance, education, energy, health, and security.

The smart city concept brings together three instances that give meaning to the term "smart". The first instance is physical, made up of the space infrastructure. The second instance concerns the administrative space constituted by governmental institutions and companies. And the third instance is structured by people and mediated by artificial intelligence coming from virtual environments for collaboration and learning. Although the discourse about the smart city has excellent adhesion in the collective imaginary regarding the future of cities and the quality of life, it is possible to group the initiatives in two lines of action (Figueiredo, 2016; Neirotti et al., 2014): on the one hand, there is a predominance of investments in infrastructure for massive data acquisition and processing; on the other hand, there are initiatives related to the promotion of education, entrepreneurship and innovation. Overall, these views do not mix and reveal that the evolution patterns of a smart city depend heavily on local context factors.

Economic development and urban structural variables tend to influence the city's digital path. However, the cities with more developed information and communication

technology systems are not necessarily better, just as the number of "smart" initiatives launched by a city's public administration is no guarantee or indicator of the city's performance in this segment. Strategies that aim to build more humane and democratic cities (through technology and data mining) can deepen surveillance mechanisms and promote more segregation (Figueiredo, 2016).

The way of visualising, programming and governing the city is also changing. Conclusion: there is a replacement of conventional patterns of political representation and social consensus, as citizens (individually) and local communities are increasingly held responsible for pursuing their well-being (Vanolo & Lombardi, 2015). This phenomenon converts cities into "collective actors", accountable for fulfilling their economic objectives. Therefore, there is a radical transformation in urban management: centralised management (controlled by the State) gives way to decentralised governance linked to networks and based on citizen's participation (who is at the same time, the user of the city and part of its intelligence).

Although the discursive regime related to the promotion of smart cities is quite optimistic, we can observe weaknesses concerning its functioning. The technology and corporations that structure these cities cannot become spokespersons for deeper sociocultural dynamics. As the consumption of this new digital and urban space of smart cities occurs through access to information technology and connectivity, the articulation with the concept of "smart" naturalises and incorporates the term in several instances (smart economy, smart mobility, smart governance, smart environment, smart living and smart people; Vanolo & Lombardi, 2015) and depoliticises political choices. This set of pre-existing urban-technological imaginaries reduces complex social problems to simple problems, aiming at a quick and easy solution, often incorporated into the ideal of apptype technology (Morozov & Bria, 2018/2019).

One of the weaknesses of this logic based on the solution is related to citizens' effective participation in building a smart city. According to Simonofski et al. (2017), new technologies play an essential role in transforming cities. However, it is the way these technologies are applied that has the potential to make them smart for city dwellers. Theoretically, the innovative focus differentiates smart cities (investment in information and communication technologies) from traditional cities (investment in transport). Therefore, to improve the provision of public services and optimise their operating dynamics, it is necessary to identify the technical and technological mechanisms which enable or prevent citizen participation. In other words, we must recognise that smart cities demand a particular type of citizen.

Citizen empowerment is, for example, the object of programs such as the media and information literate (MIL) cities of the United Nations Educational, Cultural and Scientific Organization (2018). It is a program that understands the city as a catalyst for citizen empowerment and the use of technology as an ally in teaching and learning about urban life. According to United Nations Educational, Cultural and Scientific Organization

(Unesco), the MIL city concept encompasses three city projects: (a) the creative city, which has recognised and certified cultural practices; (b) the smart city, which emphasises the importance of connectivity (through information and communication technology) for the quality of life of its inhabitants; and (c) the sustainable city, which presents a balance between economic, ecological and social aspects. According to MIL laws (Grizzle & Singh, 2016), this implies educating, training, and empowering city dwellers (of all age groups and social classes) and the various actors participating in the construction and living process in the city. However, it is not an easy task, mainly due to the economic, social and cultural barriers that citizens and (public and private) organisations face concerning communication in the digital environment.

From the importance that technology acquires, the term "literacy" arises to designate the skills suitable for the 21st century. Although Unesco recognises that "the impact that emerging technologies and their potential convergence may have on each individual in the future, as well as on the communication and construction of knowledge societies, is not known" (Sayad & Bonami, 2019, p. 227), Unesco also understands the MIL program as a set of skills and competences for the exercise of citizenship, critical thinking and democratic participation in current times. However, it is necessary to consider that, in addition to the potential vulnerability of these systems designed to facilitate interaction, not all citizens are equal in terms of access or skills. This "digital gap" means that some citizens are able to participate more easily than others through information and communication networks.

The Brazilian context illustrates the consequences of this gap. At the same time as the federal government plans to digitise 100% of public services by 2022 (*Brasil Lança Sua Estratégia de Governo Digital para 2020 a 2022*, 2021), the *TIC Domicílios* (ICT Households) survey (Núcleo de Informação e Coordenação do Ponto BR, 2021) estimates that the number of internet users in Brazil reaches 152,000,000, which is equivalent to 81% of the population aged 10 years old and over. Although the result consolidates an improvement in access and is publicised with optimism, it also means that about 19% of the Brazilian population would be on the sidelines of a government digitisation project. The exclusion of elderly people is even greater. Only 50% of Brazilians aged 60 or over are internet users. Thus, there is a paradox here. Unless public policy succeeds in promoting digital inclusion, the city of the future might exclude precisely the age group projected to grow the most in the coming decades. In 2060, for example, one in four Brazilians will be 65 years old or older (*Projeção da População 2018*: *Número de Habitantes do País Deve Parar de Crescer em 2047*, 2018). In other words, the question is: are smart cities age-friendly?

To answer this question, we must verify the qualification of older people for this efficiency project based on technology. Digital inclusion is, however, only a part of this complex problem inherent to smart cities. In this sense, two distinctions should be made. The first one is between access and participation, from the perspective of Carpentier (2012). Access is the necessary condition for interaction and participation. Participation,

in turn, concerns empowerment and the ability to make decisions, including the possibility of promoting the interests and needs of social actors. The second distinction is between participation and involvement, from the perspective of Simonofski et al. (2017), while participation is related to citizens' activities, involvement corresponds to a psychological state of personal relevance.

Based on that, we propose the following analysis: we approach how the access of elderly people to the techno-informational-communication project of the smart city occurs, we verify whether this access enables the participation of elderly people and makes their interests and needs representative, to transform the city into a *smart* and age-*friendly* city, and we discuss whether this participation takes place through a sense of involvement, capable of recovering their status as a resource to society while providing them with a sense of usefulness. We situate the negotiations between access, participation and involvement in the Brazilian context focusing on the experience of a group of older adults in the city of São Paulo. Based on ethnographic findings, we then return to the hypothesis that smartphones — in the way older people appropriate them — "informally" structure an age-friendly city that is at the same time smart and accidental, as we will demonstrate.

3. Gap for Inclusion of Elderly People in the Smart City Project: The Brazilian Context

Smart cities often minimise citizens' participation in data gathered from their interactions with the city. These data would support decision-making and governance, focusing on optimising the city to respond to its inhabitants' needs. From this perspective, (reduced) participation is the result of the interaction with its digitized mechanisms. Even so, this "participation" presupposes an "interaction" made possible by "access" to a network of digitised mechanisms, which starts to mediate urban life. At first, we can propose access is the connection to this network. As previously discussed, internet access in Brazil reproduces the country's inequalities. Addressing social disparities, the number of households with access to the internet varies from 64% in class D/E to 100% in class A. Regarding education, 73% of Brazilians with elementary education are internet users; among users who have higher education, this index rises to 96%. In addition, there is also the age issue. Only 50% of Brazilians over 60 years old are internet users — the lowest percentage among all the age groups (Núcleo de Informação e Coordenação do Ponto BR, 2021).

This inequality also impacts the interaction through digitised mechanisms that mediate urban life and citizens' rights. During 2020, for example, the percentage of Brazilians who were internet users and accessed public services online was 15% in class D/E and 63% in class A. Among those with elementary and higher education, 15% and 68% respectively. Among Brazilians aged 60 and over, only 29% accessed this type of service. In the case of this age group, it also worth noting that 64% of internet users aged

60 and over have access exclusively via smartphones — the highest percentage among age groups over 15 years old (Núcleo de Informação e Coordenação do Ponto BR, 2021). Therefore, we must recognise the importance of the mobile experience in the interaction and participation of older people in smart cities and problematise it in terms of the usability of applications.

Morris and Murray (2018) propose that we live in an age of apps driven by the idea that if there is a problem (ordinary or not), there must be an app to solve it — whether it is a simple or a complex app such as the mega apps represented by Facebook or the Chinese We Chat. Every day and mundane issues are precisely what smart cities aim to solve in the urban context and what age-friendly cities aim to optimise in terms of the possibility of active ageing. Therefore, applications would be a solution for managing and a resource for planning. They can gather the data to understand the problem and improve the technology that aims to solve it. Let us take the city of São Paulo to illustrate this from the perspective of urban transport optimisation since it is essential to enable the access of older people to activities related to active ageing

Dwellers of São Paulo can choose SPTrans applications to recharge their bilhete único (single ticket), the card used to pay for public transport. Registration to have the single ticket provided by SPTrans became mandatory and can be made online (https://scapub.sbe.sptrans.com.br/sa/acessoPublico/novoUsuario.action). The CPTM application (CPTM, n.d.) is available for operational information. Regarding driver services through online platforms, it is necessary to download the app of the available players, such as Uber and 99. Also, residents can still choose shared transportation and travel by bicycle. One option is to rent Bike Itaú via the app — a partnership between Itaú Unibanco and the company TemBici. Another alternative is the car itself. In this case, the driving permit app, Carteira Digital de Trânsito (digital transit wallet; SP Notícias, n.d.) offers a digital version of the license. Finally, the Zona Azul Digital (digital blue zone) app is mandatory for payment of fees to park the vehicle in public areas.

The "appfication" of urban life and the digitisation of services has been even more accelerated due to the COVID-19 pandemic when social isolation restricted urban displacement. In this context, the federal government's emergency cash transfer program required the use of the Caixa Tem (Caixa has) app (Caixa, n.d.). Mandatory procedures to keep receiving social benefits — such as retirement benefits — have also become available online. In the city of São Paulo, the election of the Great Municipal Council had the option of online voting through the Participe+ platform, which aims to "provide an environment for the discussion and formulation of municipal public policies in a collaborative way between the population and the government" (Participe+, n.d., para. 1). Although some of these services can also be accessed through websites, in the case of internet users aged 60 and over, it is necessary to consider that access is exclusive via their smartphones for more than half of them. Therefore, websites and apps will result in a mobile experience for this age group.

Regarding the design of mobile interfaces, developers are criticised for disregarding the natural changes of ageing, such as cognitive, motor and sensory losses (Rocha & Padovani, 2016). Small types, inefficient use of colours and contrasts, few options to correct errors, too many features or steps to perform a task, difficulties entering and saving data, complex navigation, lack of clear instructions and feedback, and inaccurate information about privacy and data collection. All factors are associated with poor usability in old age.

We will expand the discussion on the consequences of these inadequacies for exclusion, considering the health area. Two factors justify this choice. Firstly, maintaining good health is essential for active ageing, which is the purpose of the age-friendly city. Secondly, the health sector and the cities have undergone similar transformations, such as the digitalisation of processes and the demand for new skills from users. In addition, it is worth mentioning that the idea that technology can automate processes (making them more efficient for the user) underpins both the cities and the healthcare system. We are, therefore, approaching the paradigm of telemedicine 2.0 with health ecosystems centred on an empowered patient, capable of seeking and managing information to make decisions about health, which can be seen as one's responsibility as a citizen (Swan, 2012). In this technological context (which includes, in the 2.0 perspective, resources such as artificial intelligence, machine learning, remote monitoring, wearables, applications and websites), the abilities related to health literacy (Kickbusch, 2001) are updated considering the digital, becoming a digital health literacy (Dunn & Hazzard, 2019).

In Brazil, telemedicine 2.0 was not widely regulated until the beginning of the COVID-19 pandemic. Practices such as teleconsultation and telemonitoring were approved on an emergency basis in March 2020 (Libânio et al., 2021). Many applications were developed or optimised in public and private spheres to provide health resources to the Brazilian population in the pandemic context. Even considering that the elderly people were the most affected by the coronavirus (Camarano, 2020), these initiatives were not designed for this specific age group. As explained by Libânio et al. (2021), elderly people — who could have benefited the most from the digitisation of these services — may have had their access or use of those resources limited by problems related to the digital divide, including the lack of skills to use digital technologies.

Regarding these skills, however, the issue of digital literacy has impacted the broader population. Since the pandemic's beginning, 20% of Brazilians have had medical appointments online (Barbosa, 2020). However, one of the reasons given by 50% of internet users who have not used the online resource was that this service was considered "complicated". The medical appointments online have shown an alternative to bypass the barriers to technology adoption, especially those becoming mandatory for the exercise of citizenship and urban life. It is, therefore, the messaging applications (WhatsApp and Telegram) that were used by 50% of Brazilians in teleconsultations, being the most used means for this purpose during this period.

Therefore, it is worth asking what the appropriation of a messaging application for obtaining health resources means and what is its potential for the digital and social inclusion of elderly people. Despite the growing number of Telegram users in Brazil, we must consider the importance of WhatsApp as a means of communication and information for the Brazilian population. In Brazil, WhatsApp is installed on 98% of devices. Of this total, 86% of users access WhatsApp every day; 74% of users take part in a group dedicated to the family; 76% of users access the app to communicate with businesses; and 61% of users make voice calls instead of calls from mobile operators (Mobile Time & Opinion Box, 2021, p. 16). Mobile operators even offered the use of WhatsApp as an unlimited service with no consumption of the data package contracted by the user (Cruz, 2018). In addition, 92% of smartphone users aged 60 and over access the app (Obst, n.d.).

The massive presence of WhatsApp on smartphones owned by Brazilians aged 60 and over is already a phenomenon under study. Connecting with family and friends is the primary motivation for using this technology among elderly people (Gonzalez & Katz, 2016). The same reason underlies messaging apps responsible for managing the communication with nuclear, extended and transnational families as well as being used for the distribution of daily tasks among family members (Nedelcu, 2017; Plaza & Plaza, 2019; Taipale & Farinosi, 2018; Webb, 2015). In the Brazilian context, WhatsApp is very likely to be the application that motivates the adoption of smartphones by elderly people, which also implies a learning process concerning this technology.

Our intention is not to highlight elderly's people's technological constraints but rather to verify what they can accomplish through WhatsApp (without downloading the various bespoke applications which now mediate urban life). The preferential use of messaging applications for teleconsultations by Brazilians, as previously explained, is a clear example of this process. Thus, the discussion we propose below focuses on the potential impacts of WhatsApp on the ageing experience in the city. We also consider whether WhatsApp alone would enable an accidental city, informally smart and age-friendly, with outcomes for health and participation. To this end, the following analysis considers the context of the city of São Paulo.

4. WhatsApp and the Aging Experience in the City of São Paulo

Analysis of WhatsApp's implications for the experience of ageing in the city of São Paulo is based on a 16-month ethnography. The first author conducted this ethnography in a middle-class district in the city's south between 2018 and 2019 (Duque, 2022). This neighbourhood has a wide range of activities aimed at the third age. These activities are linked to the active ageing framework. The first author followed the participants' daily routine by attending social events, a course on the use of WhatsApp and smartphones, meditation practices, pilates and yoga classes and became part of a group that discussed work alternatives for elderly people.

A WhatsApp group is usually created to support the activities aimed at the third age. Therefore, participant observation also contemplated these online spaces. In-depth

interviews were carried out with 38 participants aged between 50 and 76 years old. Participants were invited randomly during the face-to-face activities observed. In addition, they were able to indicate relatives and friends who used services for the third age in the neighbourhood where the research took place. The in-depth interview was structured in three parts, with questions about the experience of ageing in the city, health and smartphone use. Participation in the research was conditioned to accepting the free and informed consent form, approved by the Research Ethics Committee (CAAE 90142318.2.0000.5511).

In Brazil, although the age of 60 is the landmark for someone to be considered elderly, the research participants indicated that, when approaching 50 years of age, they were already treated as elderly people and victimised by ageism. In this sense, they claim that they live in "limbo": they are considered too old for the labour market and too young for retirement. Among retired participants, most believe that they retired early. The decision to retire was not based on the wish to enjoy free time but rather on rumours of a possible reform in the social security system — consolidated in 2019 (Temóteo et al., 2019). The lowest retirement age recorded among survey participants was 49 years old.

This early exit from the labour market was directly related to their use of technology. As an example, we can compare the experience of three participants: a 72-year-old man, who has been retired for 20 years, does not use banking apps and prefers to go to the bank in person; a 62-year-old woman, retired for 10 years, who uses exclusively banking apps; a 63-year-old woman retired for almost 3 years, uses banking apps and makes investments and international transfers via apps. The comparison is coherent if we consider that 20 years ago, access to free email accounts was widespread in Brazil (Karasinski, 2009) and that the consolidation of social networks (such as Facebook) occurred in the past decade. Therefore, the workplace emerges as a factor that facilitates the adoption of this type of technology, mainly because it is the place where technology would be available first with no cost for employees and with applied demands that could make its adoption and learning more accessible. In this perspective, for the research participants, early retirement is an event that triggers the process of digital exclusion.

Outside the labour market, other reasons motivate participants' interest in smartphones. As explained earlier, the use of smartphones is stimulated by the wish to reconnect with family and friends — which, in this context, means adopting WhatsApp to join the conversation. Courses on how to use WhatsApp aimed at the third age are the most popular among participants. The first author of this article took part as a volunteer teacher in one of those courses during three semesters. During this period, it was possible to map several learning barriers. The first of them is the psychological one. Students arrive at the course with low self-esteem, aggravated by ageism. This type of prejudice even occurs on the part of their children, who are unavailable to help them. Their lack of patience is why they seek "professional help". In addition, many of them believe they are too old to

learn, even though they start the course with WhatsApp already installed on their smartphones (the download is usually made with the help of family members or friends).

From the experience of these students, it was also possible to verify the inadequacy of application interfaces for this age group. Font size, contrast, lack of guidance on commands, lack of feedback on actions and motor difficulties could be observed during the learning process. The device itself can be an issue for restricting their access and usage. Participants had second-hand smartphones, which usually had storage and battery problems. This exacerbates the issue of self-esteem because the limitations of the device were internalised as personal failures or inabilities by the students. The last issue was the memory. All students used paper to create lists and memorise the steps necessary for actions on WhatsApp. This tactic does not lead to emancipation or digital literacy since students completed the course only knowing how to repeat steps. Most of them failed to replicate the logic learned on WhatsApp to other applications.

Even so, in terms of participation, as Carpentier (2012) proposed, access to WhatsApp groups enables the promotion of interests, the debate on needs and evaluation — for example, recommendation, criticism or boycott — of policies, products and services aimed at the third age. These WhatsApp groups function as forums, also a smart city feature. Participation in these networks promotes the selection of service providers and urban life optimisation.

In addition, among participants, the free time associated with retirement is seen as uselessness or denotes character flaws. That is the reason why, when retired, participants take part in various activities aimed at third age. With their schedule full of commitments, they reproduce their work routine until they can socially present themselves as productive citizens of São Paulo. Participation in WhatsApp groups as content curators can also help participants present themselves as active persons. Their work as curators is visible to other people, proving that they remain active as citizens and are part of an active ageing project (Duque, 2021b). However, the work of a "curator" can be problematic. If, on the one hand, sharing information considered helpful by the group can generate social capital, on the other hand, this social capital is highly disputed. Thus, it can lead to the dissemination of fake news.

The ability to identify fake news is related to the issue of digital literacy as the ability to process, judge and elect reliable content online. When it comes to medical information, participants tend to avoid online searches because they could not choose reliable results. This finding allows us to question the model of autonomy advocated by telemedicine 2.0 and, at the same time, highlight the distinction between an informed citizen and an empowered citizen concerning health management (Santana et al., 2011). Furthermore, applications developed to facilitate access to health resources in public and private health systems could provide professional advice and compensate for that. However, when they want to schedule an appointment, participants generally prefer to leave these applications and access websites (when available), call or go to health

facilities in person. The functionalities offered by the applications are reduced to the use of the user's digital identification card, presented during consultations.

An alternative would be to make professional advice available on WhatsApp. Even before teleconsultations regulation in Brazil, more than 80% of physicians in the state of São Paulo declared that they had already used technologies to assist patients (Collucci, 2019). In addition, 78.69% of them favoured using WhatsApp (Felix, 2018). However, participants perceive that contact via WhatsApp is only made available by private doctors and not by those who work in the public health network or for health insurance plans. It does not mean that participants do not use WhatsApp to obtain medical information. Indeed, they turn to their network available on WhatsApp groups for medical support, where they look for friends they know who work in the healthcare area. By doing this, they can receive informal guidance (based on friendships) and reliability (provided by a healthcare professional).

Requests like those expand the functionality of WhatsApp groups because they structure a network of favours that generate impacts both for autonomy and participation. Friends can make them download new apps, assist in obtaining an online service, or follow up on a medical appointment. In addition, participants can use these connections to overcome bureaucracy and get preferential health care (in the public or private health system), which is related to the "Brazilian way". This practice is rooted in the culture and based on favours obtained from relationship networks to deal with bureaucratic difficulties (Prado, 2016).

These favours are granted among older people based on reciprocity, producing a cycle of exchanges that structures social bonds — as if it were an exchange of gifts (Mauss, 1960/2003). WhatsApp enables a circle of exchanges when participants commit to meeting their peers' needs. In this context, responding to a friend's request on WhatsApp means keeping a positive balance in the bank of favours that also sustains a network of solidarity crucial for the experience of ageing in the city.

In addition to informally collaborating to prevent and maintain health in old age, the WhatsApp network also enables participants to care for elderly parents. Intergenerational care is another component of the active ageing framework, which proposes the role of preferential caregiver of family members as one of the ways to participate in and contribute to society (World Health Organization, 2002). WhatsApp connection is also a resource for prolonging autonomy, especially for elderly parents who live alone. This connection compensates for the distances and difficulties of moving around the city. Children can monitor elderly parents through the app when the overlap between surveil-lance and care is observed.

In Brazil, social isolation became compulsory from the beginning of preventive measures against the COVID-19 pandemic. This policy lasted until the vaccination of the elderly population, which took place in 2021. In this context, even with the interruption of face-to-face activities aimed at the third age in the city of São Paulo, WhatsApp

groups remained active. These groups served to exchange health information and as a resource for maintaining social ties during isolation. However, WhatsApp does not solve the problem of access to digital services available in other platforms or applications (the pandemic has accelerated the digitalisation of services even more). On the contrary, based on participants' experience, this access may have been hampered by isolation as they usually ask relatives or friends for help to download or set up applications.

Although limited, we should highlight the benefits that the network structured by WhatsApp groups generated for participants before the pandemic. In other words, it is necessary to recognise the impact of this network on digital inclusion and its potential to grant an experience of involvement and a sense of belonging as citizens. From this potential, an accidental city emerges between two city projects: the *Age-friendly City* (which favours active ageing) and the *Smart City* (whose network aims to optimise resources to respond efficiently to the needs of its inhabitants). Based on this third city, we will make our final notes on older people's empowerment for participation (albeit centred on WhatsApp).

5. Final Notes: The Accidental City

Pype (2017) approached the official discourses about smart cities in the Democratic Republic of the Congo. Far from the Congolese call for progress, she argues that this western imaginary of smart cities (operated by wireless technologies, with highly connected service and communication networks) appears out of step with the reality of African urban centres. From her ethnography in Kinshasa, the anthropologist coined the term "smartness from below" to address all the creativity and (formal, informal and immoral) knowledge employed by the Congolese in overcoming the limitations of urban infrastructure to engage with technology daily and turn their reality into a "smart" experience if the city.

This "smartness from below" is the same observed in the group of older adults from a middle-class neighbourhood in the city of São Paulo, especially concerning their appropriation of WhatsApp. In this case, their limitations are not restricted to connection alone, but also encompasses the skills needed to enable their access and engagement with platforms that structure (based on algorithms, websites and applications) the participatory processes in the city. In that perspective, technologies increasingly mediate the practices of those we call "citizens", "consumers" or "users", and those no longer represented in this project (Canclini, 2019).

This participation, which would be unfeasible by the lack of digital literacy, is what WhatsApp enables in terms of outputs. However, the platform does not solve the digital exclusion from the institutional channels created to provide access to health, transport, citizenship and consumption in general. Participants compensate for that by creating an alternative informational network shown to be equally efficient in its impacts for active ageing in the city. They are protagonists in this network, whether in terms of curating helpful information to improve the ageing experience or exchanging favours that

overcome digital and bureaucratic barriers, enabling new forms of care and autonomy. It is for this network that they work. By doing this, they also recover their productivity and dignity, which can promote a sense of belonging as citizens of the city of São Paulo.

This city of São Paulo — discussed, edited, shared and made visible, taking into account older people's interests — was not anticipated either in the project of an age-friendly city or in the scheme of a smart city. Instead, it is an accidental city that emerges where neither of these projects fully succeed. Despite this, the accidental city solves the same challenges, making the experience of ageing more intelligent and friendly. Thus, learning from the accidental city and its "smartness from below" can be a way to minimise barriers to adopting new technologies by older people and optimise resources that aim to promote health, participation, and autonomy. An example was the group "WhatsApp Solidário" (solidary WhatsApp), created by the Coordination of Policies for the Elderly of the Secretariat of Human Rights and Citizenship of the city of São Paulo in March 2020. This group sought to face the harm caused by social isolation arising from the pandemic. Because this initiative was developed on WhatsApp, it was implemented in 7 days. From the start, 200 elderly adults took part in it, having online access to physical, educational and recreational activities and receiving psychological support (Gomes, 2021).

This article aims to contribute to the problematisation of older people's digital and social inclusion and highlight the opportunities to explore the digital resources already in use by this age group. In the Brazilian context, this resource is WhatsApp. Even so, we recognise the challenge of educating older people in Brazil for the digital literacies involved in online and offline practices, which are necessary for democratic improvement. It is the only way the urban environment can work as a privileged place for citizen actions.

Translation: Hadriel Geovani da Silva Theodoro

AUTHORS' CONTRIBUTION

Marília Duque carried out the investigation and formal analysis. She contributed to the conceptualisation, writing — original draft and writing — review and editing. Adriana Lima de Oliveira contributed to the article's conceptualisation, formal analysis, writing — original draft and writing — review and editing.

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BIOGRAPHICAL NOTES

Marília Duque holds a PhD and a master's degree in communication and consumption practices from the Postgraduate Program in Communication and Consumption Practices — Higher School of Advertising and Marketing of São Paulo. During her PhD, she carried out a research internship in anthropology at University College London. She is currently a researcher at the *Anthropology of Smartphones and Smart Aging* project, based at University College London, and MediaLab ESPM (Escola Superior de Propaganda e Marketing; Higher School of Advertising and Marketing). She holds a bachelor's degree in social communication with a specialisation in advertising from the School of Communication and Arts — University of São Paulo.

ORCID: https://orcid.org/0000-0003-4805-6903

Email: mariliaduque@litera.city

Address: Rua Napoleão de Barros, 1075, São Paulo, SP, Brazil

Adriana Lima de Oliveira Oliveira holds a PhD and a master's degree in communication and consumption practices from the Postgraduate Program in Communication

and Consumption Practices — Higher School of Advertising and Marketing of São Paulo. During her PhD, she carried out a research internship in communication and media studies at Nova University Lisbon. She is currently a researcher at the research group Biocon: Communication, Discourse and Consumption Biopolitics (Higher School of Advertising and Marketing de São Paulo) and an executive member of the Higher School of Advertising and Marketing de São Paulo committee on human rights. She is a specialist in communication management: politics, education and culture from the School of Communication and Arts — University of São Paulo. She holds a bachelor's degree in social communication, specialising in advertising from Universidade Anhembi Morumbi.

ORCID: https://orcid.org/0000-0003-3731-0611

Email: adrianalima@litera.city

Address: Rua Dr. Ferreira Lopes, 317, São Paulo, SP, Brazil

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