13 Contrasting ageism in research on older adults and digital technologies A methodological reflection

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In this chapter, we propose a reflection on the challenges that doing social science research on ageing and digital technologies may pose in terms of age-related stereotypes that researchers risk to perpetuate and reinforce. To this aim, we draw on three pieces of research that the authors carried out in Italy, based on digital methods, social experiments and online methods. These methods are currently widely employed in the social sciences (Salganik, 2018) but less used in social science research on ageing (Peine & Neven, 2021).

As Iversen and Wilinska argue:

The creation of academic knowledge, such as media institutions, texts and technologies, makes age and ageing socially visible as well as relevant and important to the ways in which we perceive ourselves, others and the social reality in which we live. By extension, old age is something that is done, and this doing involves the processes of categorising, organising and ranking according to socially and culturally defined imaginaries.

(Iversen & Wilinska, 2020, p. 124)

The literature highlights that studies that claim to reject stereotypical representations of older digital technology users as intrinsically deficient (Rosales & Fernández-Ardèvol, 2020) often tend to: a) exclude some of them – usually, the oldest-old, who are assumed to be lacking the digital skills needed to take part in the study (Howlett, 2021; Swift et al., 2018) and b) represent them as "endowed with a partial agency" in using digital media (Caliandro et al., 2021, p. 54).

As a matter of fact, based on the available statistics, older adults can be classified as less active users. The fact that their use of digital media is limited – in terms of time and variety of tools – when compared to other age groups is often linked to a series of "negative" characteristics. Specifically, they tend to be defined as less interested in digital technologies, less prone to learn technology-related skills, and, as mentioned above, less able to exercise their agency (Millward, 2003). However, as highlighted by Loos et al. (2012), the centrality of digital media does not depend on the intensity of the use but on the relevance and meaning that the users attribute to these tools. When older people become digital technologies users, they can be "active users" (Vincent, 2023, in this volume): they use digital technologies for fulfilling personal tasks and reaching personal goals (Marston et al., 2020), attribute certain meanings to the use of digital media (Taipale & Farinosi, 2018), and contribute to the construction of specific digital cultures (Comunello et al., 2020).

The fact that social research on ageing and digital technologies risks reproducing standard stereotypes on older technology users can be linked to the assumptions that inform the research process. First, how age is conceptualised, which is reflected in the methodological choices we make (e.g., age groups to be included in the study, language used in the interview outline, etc.) – and even more to the degree of researchers' reflexivity about age images and categorisations (Iversen & Wilinska, 2020). As Fernández-Ardèvol et al. (2019) stress, to confront the age "difference" in a positive way, it is important to make the assumptions at the base of our works explicit and critically discuss them throughout every stage of the study.

How scholars studying stereotypes risk reproducing and reinforcing these processes is a matter discussed in the literature (Cecchini, 2019; Chenail, 2011; Troyna & Carrington, 2005). Nonetheless, in our opinion, a specific debate around the reproduction of ageing stereotypes is very much needed. Moreover, considerations on how to handle, in practice, these risks are still lacking (Cecchini, 2019). Therefore, in this chapter, we wish to contribute to kick-starting a discussion about the risks of ageism against older adults in social science research practice on ageing and digital technologies and to provide researchers with some practical suggestions on how to cope with them.

Context, objectives and methods

As previously mentioned, our reflection draws upon three empirical studies carried out in Italy. Specifically, we present three pieces of research developed within the project Aging in a Networked Society: Older People, Social Networks and Well-being (https://ageingsocieties.unimib.it/) (2018–2020), funded by Fondazione Cariplo. Overall, the project was aimed at investigating the impact of offline (traditional and face-to-face social networks) and online social networks (social relationships developed using social networking sites (SNS)) on older adults' well-being, as well as at exploring the role of smartphone and SNS use on older adults' social inclusion and intergenerational relationships, in Italy. Italy represents an interesting and relevant context in which to observe the relationship between older adults and digital technologies – and thus reflect on the methodological challenges that may arise when studying these topics. In fact, not only is Italy one of the European countries with the highest percentage of people aged 55+ in the total population (Eurostat, 2020), but also older adults living in Italy show lower percentages of Internet and social media use when compared to their European peers (Sala & Gaia, 2019).

The first study - the AUSER (Associazione per l'invecchiamento attivo) study (the study was named after AUSER, the major Italian association for the promotion of active ageing, whose volunteers were involved as participants; https://www.auser.it/) - employed smartphone-based digital methods with the aim of understanding the role of smartphones (and especially of social media used via smartphone) in older people's everyday life, as well as the way in which such devices shape their social relationships (Caliandro et al., 2021). Specifically, the AUSER study aimed at exploring the forms of sociality with peers and family members older adults put in place through smartphones in their everyday life, as well as the meanings they articulate around smartphone-mediated forms of sociality. To meet the study's aims, the researchers installed on the smartphones of 30 volunteers aged 62-76 an ad hoc app, RescueTime (https://www. rescuetime.com/), to "observe" and measure their daily patterns of use. The app remained installed on the participants' phones for one month (24/01/2019-24/02/2019). Then, to understand the motives behind the use of a given app/website, as well as to gain a broad understanding of the socio-cultural practices the participants developed around their smartphones in everyday life, 3 focus groups and 20 semi-structured interviews were conducted.

The second study – The Aging in a Networked Society-Social Experiment (ANS-SE) – was a randomised controlled trial conducted on older adults residing in Abbiategrasso, a town located in the Milan area, aimed at assessing the short and long-term impact of SNS use on older adults' loneliness and social isolation. The experiment was structured into one treatment group and two control groups; the intervention consisted of participation in a training course on SNS use (treatment group) or on lifestyle and brain functioning education (active control group). The inactive control group was constituted of a waiting list. The study was constituted by two stages, i.e., the baseline and the follow-up (see Zaccaria et al. (2020) for details on the study protocol).

The third study is the Italian Longitudinal Study on Older People's Quality of Life during the COVID-19 pandemic (ILQA-19): a qualitative case study, with a longitudinal design, conducted on older adults through online qualitative interviews. It involved a cluster of ten villages in Northern Italy that experienced the first lockdown in Europe. ILQA-19 investigated the social consequences of the pandemic on older adults' everyday life, focusing on the resources employed to face social distancing measures and the role played that ICT use plays within this process. This study, carried out fully remotely and ongoing at the moment of writing, was conducted on a panel of 40 older adults – a purposive sample heterogeneous in terms of age (65–80 years old),

gender, social background and ICT skills. Wave 1 started in spring 2020, while wave three is currently fielded.

(Methodological) lessons learned

We will now give more details about the characteristics of the methods employed in the three studies and discuss, for each of them, the challenges encountered in our work – in terms of reproduction of ageist biases against older people – and how we handled them.

The AUSER study

The AUSER study employed smartphone-based digital methods and, more specifically, tracking techniques. Tracking techniques are increasingly employed in social research insofar as they allow to study people's digital practices in (nearly) real-time, within the natural environment in which they occur, and with an exceptional degree of granularity (Bouwman et al., 2013). By installing an ad hoc app or software on participants' digital devices, it is possible to directly observe and keep track of a wide variety of (key) digital practices, such as patterns of smartphone use, browsing behaviours, clicking behaviours, and styles of navigation within websites, etc. (Aipperspach et al., 2006). In particular, apps/software for device tracking have demonstrated to be particularly helpful and popular in social research on smartphone use (Stier et al., 2020). As a matter of fact, studying patterns of smartphone use through tracking techniques brings along several methodological advantages. Specifically, it allows the researcher to (a) observe social actors' everyday digital practices which would be otherwise unobservable (e.g., the number of times a person accesses a smartphone in a day); (b) get very granular data that would not be possible to obtain through analogue methods (e.g., number of seconds a user spends on a given smartphone app each time they access it); (c) overcome the measurement errors occurring when measuring everyday digital practices with analogue methods, such as questionnaires or self-tracking sheets (Boase & Ling, 2013) (e.g., it is very unlikely that the interviewees would remember exactly the amount of time spent on their smartphone over a week and/or the number of apps daily accessed).

Tracking techniques fall in the broader epistemological framework of *digital methods* (Audy Martínek et al., 2022). Digital methods consist of the "deployment of online tools and data for the purposes of social and medium research. More specifically, they derive from online methods, or methods of the medium, which are reimagined and repurposed for research" (Rogers, 2017, p. 75). The digital methods paradigm is premised on the principle of *follow the medium*, that is, to take advantage of the natively digital methods that digital environments (e.g., search engines employ to gather, order,

organise, rank, and rate digital data – as with APIs, algorithms, links, likes or hashtags (Rogers, 2019).

The use of tracking devices is also gaining traction within digital research on older adults and digital media. For example, exploiting the functionalities of ad hoc tracking devices, Rosales and Fernández-Ardèvol (2019) systematically investigated everyday habits of 238 Spanish smartphone users aged 20–76, highlighting different patterns of use within different age cohorts.

With specific reference to this field of research, we believe that drawing exclusively on the principle of "following the medium" carries some risks of ageism against older adults. Let us imagine that after tracking the smartphone of an older participant for a week, we find out that for most of the time they used only WhatsApp. This mere quantitative datum compels us to make assumptions and speculations. Two kinds of assumptions can be made based on common sense or on literature. If we reason through the lens of common sense, it would be easy to jump to the conclusion that such excessive use of WhatsApp is linked to a lack of digital skills - preventing older users from taking advantage of all functions offered by the device. On the other hand, if we look exclusively at the literature, we could be tempted to think that the participant used WhatsApp (and so the smartphone) to stay in touch with some younger relatives from which they can get help and support (Doyle & Goldingay, 2012). Not to mention that focusing exclusively on quantitative data leads researchers to overlook exploring the cultural dimension of smartphone practices, which is crucial when studying the use of digital technology in everyday life (Madianou & Miller, 2013).

To prevent the risk of reproducing stereotypes on older technology users, in the AUSER study, we decided to combine digital methods (tracking techniques) with qualitative methods, i.e., focus groups and qualitative interviews (Caliandro & Gandini, 2017). More specifically, instead of *following the medium* only, we decided to *follow the users*, too (Caliandro, 2018, p. 55). Speaking in more practical terms, to "follow the users", methodologically, means: (a) making the users your co-researcher; (b) paying attention to users' practical usage of digital technologies in everyday life; (c) paying attention to the systems of meanings users attach to digital technologies; (d) define with the users the ethical boundaries of your digital research (Caliandro, 2021). Let us explain this in detail.

Rescue Time – which, as mentioned before, we installed on the smartphones of 30 volunteers –retrieved many rich and valuable data, such as the whole list of apps/websites participants accessed every day and the exact amount of time they spent on them. However, analysing these data would not allow us to know the exact motives behind the use of a given app/website, nor to obtain a broad understanding of the socio-cultural practices participants developed around their smartphones in everyday life. To fill this gap, we took advantage of qualitative research techniques: *focus group* and *face-to-face interview*. Through focus groups, we gained an understanding of our dataset, which would have been impossible to get otherwise. For example, through Rescue Time, we noticed a dramatic drop in smartphone activities during the weekends. We brought up this odd result in one of the focus groups, as well as in some face-to-face interviews and the conundrum was immediately clarified by participants. They explained to us that during the weekends, they are usually more engaged in "real life activities" (e.g., relaxing in front of the TV or hanging out with friends/relatives) and so, physiologically, they have less time to spend on their smartphones. Qualitative methods were also useful to set the ethical boundaries of our research. Given the invasiveness of Rescue Time, we were worried about the (legitimate) privacy concerns participants harboured about the research. Surprisingly, during the focus groups, participants admitted not being so worried about privacy issues. Instead, they had many "technical" matters they wanted to discuss with us. For example, they wanted to be reassured that the app would have not consumed their data and/or battery - (something that Rescue Time does not do). This "incident" taught us a valuable lesson about our own (ageist) conceptions of older technology users. In fact, when we started the research, we did not consider sharing such technical details with participants because we presumed they would not be interested in them.

In conclusion, this research experience helped us reflect on the fact that, as social researchers, we must be the first ones to make an effort to overcome the image of older users as tech illiterates. In doing so, we could concretely contribute to contrasting the rhetoric of compassionate ageism (Binstock, 2010) that tends to be still prevalent when discussing older adults and ICTs.

The ANS-SE study

The ANS-SE study was a randomised controlled trial. Experimental research draws its origin from the scientific method and lies at the heart of the socalled positivistic approach. Experiments can be defined as "ways of assessing causal relationships, by randomly allocating 'subjects' to two groups and then comparing one (the 'control group') in which no changes are made, with the other (the 'test group') who is subjected to some manipulation or stimulus" (Payne & Payne, 2004, p. 85). Social experiments are characterised by three main elements (Lewis-Beck et al., 2004, p. 2): (a) manipulation of the amount (as in the case of quantitative independent variables) or the level of the independent variable (as in the case of qualitative independent variables); (b) control of nuisance (or confounding) variables using random selection and random assignment of subjects into treatment conditions; and (c) careful recording or observation of the change in the dependent variable. We can distinguish between different types of experiments and experimental designs (see, e.g., Coleman, 2018). The ANS-SE study is a field experiment.

Despite the limited role that experimental research attributes to study participants (often considered as passive research subjects), there are examples of innovative research methods that use experimental research in combination with other qualitative methods (e.g., Harrits & Møller, 2021; Levy Paluck, 2010; Prowse & Camfield, 2013; Steils, 2021). These new approaches to experimental research implicitly recognise the relevance of study participants as active actors of the research process. However, for a number of reasons, older adults are still often underrepresented/excluded from these studies, with many published articles reporting unjustified upper age limits when designing clinical trials (Bloch & Charasz, 2014; Van Spall et al., 2007). Indeed, some argue that older age is often associated with non-response (e.g., Golomb et al., 2012; Herzog & Rodgers, 1988). Even when researchers involve older adults in their studies, they continue to passively engage with them, often only requiring advice or feedback in the early or later phases of the study (Merkel & Kucharski, 2019). Grigorovich et al. (2021) have recently called for gerontechnology research to adopt study designs and guarantee a participatory engagement of older people.

In the ANS-SE study, when recruiting participants, implementing the experiment, and evaluating the findings, we drew on considerations and guidelines entailing older adults' involvement in research, with a specific focus on best practices concerning ageing research on technology use (e.g., Mannheim et al., 2019; Poli et al., 2021). At the recruitment stage, older adults are often excluded for two main reasons, i.e., age and lack of digital skills. On the one hand, the oldest-old (aged 80 and over) are often considered as a homogenous population with frail health, cognitive problems, and less motivation, being therefore very likely to refuse (or interrupt) taking part in experimental research (Cuddy et al., 2005; Swift et al., 2018). On the other hand, poor digital skills may represent a technology-driven barrier to participation because of study design requirements (e.g., technologically savvy participants (Poli et al., 2021). In adopting an age-inclusive approach, the ANS-SE population was constituted of the oldest-old (i.e., individuals aged between 80 and 84), who were recruited from an ongoing population-based longitudinal study - i.e., the Brain Ageing in Abbiategrasso Study (InveCE. Ab study) (Guaita et al., 2013). This strategy also allowed us to overcome the problems of external validity (e.g., selection bias) that arise when conducting research on convenience samples (Chen & Schulz, 2016). We also included in the study older adults with poor digital skills, who were provided with the training needed to effectively use the study devices (i.e., smartphones) before the start of the intervention. Thus, previous experience with technology use was not considered an inclusion criterion.

Also, the procedures developed for obtaining informed consent may discourage older adults' participation in research. Communicating the study objectives in a clear way or simplifying consent forms can facilitate consent procedures and increase understanding and participation (Dunn & Jeste, 2001). In our experiment, we drafted the consent documents in plain Italian in collaboration with geriatricians and neuropsychologists and organised individual (telephone and face-to-face) meetings to provide further details on the experiment. This strategy proved to be effective in obtaining participants' signed consent forms. However, due to the lack of confidence in technology use, about 20% dropped out of the study, especially in the early stages of the intervention. Devoting more time to explaining to study participants the potential of smartphone use and the benefits derived from the study participation may have led to higher retention rates.

At the implementation stage, it is important to tailor the interventions according to older adults' needs. Indeed, ignoring sensory decline in older age (e.g., in vision or hearing loss) can influence active participation in experimental activities and, eventually, can have a detrimental impact on the research findings. Therefore, study materials should be written using fonts, colours and sizes suitable for all participants, and background noises should be minimised to facilitate better understanding (Mannheim et al., 2019). The appearance and aesthetics of the devices/tools used while carrying out experiments are important too. Indeed, they can be symbols of frailty and, therefore, can be considered stigmatising, reducing the willingness to be involved in a study (Zwijsen et al., 2011). In the ANS-SE, we conducted all research activities (e.g., meetings, training activities, etc.) in a friendly environment, already familiar to the participants (because of the previous participation in the already mentioned InveCE.Ab study), with a sound amplification system and protected from noise sources. We also used an overhead projector with a large screen to accommodate the needs of study participants with poor eyesight and difficulties in reading written materials. To avoid using stigmatising devices, we provided participants in the treatment group with a smartphone with a special design: despite having some simplified functions, its aesthetics was quite similar to that of the most common smartphones.

Another key aspect to consider when designing interventions in experimental research on older adults is the provision of adequate training and tutoring because some participants may not be familiar with the devices and the tools used in the study. In our case, we organised supplementary classes on smartphone use (e.g., some participants had difficulties with the "touch" function) and specific telephone and in-person tutoring on smartphone and SNS use. Older adults' high participation in tutoring classes may suggest that our introductory classes were not successful in meeting their training needs. Specifically, we should have dedicated more time to provide basic skills for using and maintaining smartphones (e.g., recharging or putting it on standby).

At the evaluation stage, including both study participants' assessment and (quantitative) data analysis, many tools and tests to evaluate older adults' well-being and performance are not "older adult friendly" (Ben-David et al., 2018). Specifically, some tests can be very strenuous or have instructions that are difficult to understand; in some cases, verbal explanations may include age-related cues driven by ageist stereotypes (e.g., emphasising that a given test is in a simplified version to meet older adults' specificities). At

the evaluation stage, we carefully designed our procedures to avoid age stereotypes activation. First, we measured participants' performance using only validated international scales specifically suitable for older adults. Second, we designed the procedures to explain and administer the tests in collaboration with a team of geriatricians and neuropsychologists. Third, before starting the study, we tested all procedures with a handful of voluntary oldest-old not involved in the ANS-SE project. This served to finalise the administration methods and evaluate the time needed to complete the tests, to avoid participant cognitive and physical burden. When researching older adults, qualitative methods are also suitable, especially to investigate attitudes towards technologies. This approach has the potential to reduce interviewees' stress if older participants have any memory impairment or difficulties in answering questions that involve particular skills (e.g., maths or logic). To overcome this problem, we designed pre-post evaluation procedures that also included some open questions to collect participants' attitudes and expectations on SNS use. However, to better grasp participants' attitudes towards technology and receive their feedback on the experiment, we could have designed a more balanced quantitative-qualitative assessment making the experiment more inclusive and participative. The choice of including open-ended questions in the assessment needs to be balanced against costs and evaluations on the interview length and participants' psychological discomfort.

Adopting a participatory approach also means involving older participants throughout the study duration, including its final stages, i.e., reporting and disseminating the results, to avoid a "hit and run" approach (Mannheim et al., 2019). This is especially the case when participation lasts over time, as in the case of our experiment, which covered two months. To involve study participants in the dissemination activities, we appointed a member of the research staff who informed the participants about important news and updates, interacting with them through Facebook or WhatsApp. In addition, we organised in-person meetings to present and discuss in plain Italian the main results; participants also had the opportunity to share their experiences in using technology with others. Furthermore, we disseminated the research findings through the local press, also available online, to reach participants unable to attend the meetings in person.

Finally, ethical issues play a key role in experimental research on older adults. First, researchers must guarantee study participants the possibility to leave the study at any time. In the case of media studies, an important issue concerns granting the possibility of being disconnected from the device (Van Hoof et al., 2018). In fact, if participants feel that their privacy is excessively violated, they may become too suspicious and decide to withdraw from the study. In the ANS-SE, all participants had the opportunity to choose when to keep their smartphone connected; in addition, we did not fix any minimum time threshold for SNS use (e.g., no minimum number of posts on Facebook or messages to be sent on WhatsApp). Furthermore, to guarantee access to the technology even after the formal end of the study, we offered participants the opportunity to keep their smartphones for free. To avoid the rise of digital inequalities, older participants in the two control groups could attend an SNS course.

The ILQA-19 study

The ILQA-19 study was based on online qualitative interviews (Hine, 2005). In these years, most qualitative studies have gradually pivoted to online forms of data collection, as social distancing measures due to the COVID-19 pandemic have limited traditional face-to-face research designs (Roberts et al., 2021). Recent literature provided a series of best practices and innovative solutions to the limitations on qualitative methods of data collection caused by social distancing measures. Specifically, literature in the field of sociology of disasters and online synchronous interviewing addressed the ethical issues related to the choice of video-calling software, e.g., the challenges in terms of data security and informed consent (Dodds & Hess, 2020; Lobe et al., 2020; Roberts et al., 2021), the efforts needed to establish trust through remote interactions, and the call for more ethically driven research to mitigate the traumatic experiences arisen from social distancing (Lawrence, 2022; Moran & Caetano, 2021). Some amendments to research designs have been discussed, e.g., innovative attempts to remote recruitment procedures (Kobakhidze et al., 2021) or flexible study timelines (Roberts et al., 2021) to meet research targets. Also, some scholars illustrated the limitations of online recruitment, especially concerning the risk of under-representation for social categories with low or no access to online technologies (Newman et al., 2021; Saberi, 2020; Sy et al., 2020), but without any practical suggestion to overcome these difficulties.

Specifically, little is known about strategies to successfully engage older adults in online interviewing. Actually, research teams have often cut older adults out from their online interviews-based studies, with the explanation that they did not meet the digital skills required to participate (Dodds & Hess, 2020; Howlett, 2021). Despite the request for more empirical data on older adults' experiences of the pandemic (Richardson et al., 2020), this tendency was particularly evident in pandemic-related research, as some scholars pointed out (Ng & Indran, 2022; Pentaris et al., 2020; Silva et al., 2021).

In the ILQA-19 study, we tried to address these very methodological gaps. When wave 1 of the study started in spring 2020, a widespread study advertising campaign was enacted among main community stakeholders: we informed local authorities, newspapers, and community leaders of the study and invited them to collaborate with the recruitment. This was part of the preliminary trust-building activities: while socially distancing, local gatekeepers could represent a guarantee for potential participants instead of in-person preliminary interactions with the research team. During the first contact with study participants, this common ground of trust was key when

convincing them to participate through video interviews: we had, in fact, to overcome some reluctances due to various reasons, such as different media ideologies (Gershon, 2010), e.g., personal preference for a normal telephone call, shyness, and/or auto-assessed low digital competences, so trust enabled a successful interviewer-interviewees interaction.

In our original research design, we fell prey to ageist misconceptions, limiting the recruitment only to older people aged 65-75 in the belief that only the youngest old would be able and willing to participate in our online study. However, as the recruitment process started, some 75+ individuals called us expressing their will to participate in the study. To adapt to a heterogeneous population and make space for an extended age range, we implemented a non-invasive protocol to preliminary assess participants' abilities and enable them to contribute regardless of their ICT skills (more details in Melis et al., 2021a). In the interactions before the interviews, we investigated preferred devices and software and personal or external resources that they could activate to prepare for the video interview, if necessary. The protocol had the emancipatory aim to allow our panel to experiment without a patronising approach, e.g., by selecting the platform they felt more confident with, asking a family member for specific assistance, and ultimately seeking technical help from the interviewer. We adapted to their preferences and intervened only if needed, allowing them to autonomously consider alternative solutions. We sent preliminary instructions in different formats depending on the preference (e.g., via email, text message, etc.) and tailored interview reminders accordingly (e.g., through step-by-step instructions or a phone call right that guided through the video call). Right before the interview, the interviewer provided assistance in case of anxious participants or should any problem arise, assuming an emphatic role (Lo & Fan, 2021). During the interviews, only minor difficulties were experienced (mostly due to poor reception), and even the less ICT-savvy users were able to contribute to the study. By virtue of the trustworthy relationship, study participants felt more confident in experimenting with ICTs even when not directly necessary for the research, i.e., by autonomously playing around to attend online dissemination activities or asking the interviewer for assistance to satisfy ICT-related curiosities. During wave 2, in spring 2021, they experimented even more, to the extent of nearly reversing traditional interviewer-interviewees power dynamics: as study participants experimented with ICT use practices to adapt to their daily habits (see also Melis et al., 2021b), we observed them while actively suggesting their preferred video-calling platforms, proposing alternatives or autonomously working out a solution in the case of technical difficulties (Melis et al., 2022).

Finally, in our experience, two main elements are to be taken into consideration when planning qualitative online research with older adults: tailored procedures and positive interaction between the research team and study participants. First, a flexible research design helps adapting to older adults' different backgrounds in terms of ICT use practices, providing personalised procedures before and during online video interviews. Second, dedicated efforts to build participants' trust are crucial in mitigating possible difficulties in online qualitative research. A positive interaction with study participants might also help negotiate and co-construct tailored procedures, enabling them to request eventual interventions that allow them to fully participate. All in all, these elements proved successful in our online research, helping us recruit a heterogeneous panel of older adults that felt at ease participating in a video interview and felt confident asking for technical assistance rather than withdrawing from participation.

Concluding remarks

To conclude, drawing on our research experience, we would like to propose some methodological suggestions that might be useful to the social researcher interested in studying ageing and digital technologies – but also digital technology use among different age groups – and avoiding reproducing standard age-related stereotypes. Despite the methods discussed in this chapter being very different, there are some commonalities that are worth highlighting. We identified three key aspects to be taken into account:

- 1 When starting a research project on ageing and digital technologies, the researchers shall discuss their own definition of the concept "older person" to be sure not to exclude people from specific age groups and to take into account the profound differences among individuals classified as older adults. A reflection on the diversity that characterises the older adults group is not only crucial for guaranteeing an inclusive approach to the recruitment of participants but also to the preparation of research materials and the very collection of data e.g., the implementation of tailored procedures might enable the inclusion of different ICT users from a heterogeneity of age groups and take into account specific needs.
- 2 The research undertaken has also highlighted the importance of adopting a participatory approach: older participants need to be consulted at each stage of the research process to allow the discussion of the empirical procedures, the meanings that researchers attribute to the data collected, and the ethical boundaries of the research itself. Adopting a participatory approach often requires mixing quantitative and qualitative methods, to ensure taking into account participants' digital media cultures and their own images of themselves as technology users.
- 3 Last, a flexible research design helps adapting to older adults' different backgrounds in terms of ICT use practices, providing personalised procedures.

As previously mentioned, our experience is based on research undertaken in Italy. This is a context in which trends in the ageing population and digital technology use make research on ageing and digital technologies particularly relevant – and thus also a reflection on the risks of reproducing ageism against older adults while researching these topics. Nonetheless, in our opinion, the reflection developed and the suggestions provided might inspire a broader debate on what we would call "methodological ageism", that is, the risk of reproducing and reinforcing, through our methodological choices, standard stereotypes on age and technology use. As far as ageism against older adults is concerned, acknowledging this risk is crucial to recognise older adults' full agency in the use of digital technologies while doing social research. In fact, like any other social actor, older adults might use digital technology to fulfil specific tasks they confront during the contingency of everyday life. Similarly, they might not necessarily use digital devices simply to join social groups but instead to actively participate in their construction.

References

- Aipperspach, R., Rattenbury, T. L., Woodruff, A., Anderson, K., Canny, J. F., & Aoki, P. (2006). Ethno-mining: Integrating numbers and words from the ground up. Electrical Engineering and Computer Sciences University of California at Berkeley, Tech Report UCB/EECS-2006, 125. https://www2.eecs.berkeley.edu/ Pubs/TechRpts/2006/EECS-2006-124.html
- Audy Martínek, P., Caliandro, A., & Denegri-Knott, J. (2022). Digital practices tracing: Studying consumer lurking in digital environments. *Journal of Marketing Man*agement, 1–31. https://doi.org/10.1080/0267257X.2022.2105385
- Ben-David, B. M., Malkin, G., & Erel, H. (2018). Ageism and neuropsychological tests. In L. Ayalon & C. Tesch-Römer (Eds.), *Contemporary perspectives on ageism* (pp. 277–297). Springer Nature. https://doi.org/10.1007/978-3-319-73820-8
- Binstock, R. H. (2010). From compassionate ageism to intergenerational conflict? The Gerontologist, 50(5), 574–585. https://doi.org/10.1093/geront/gnq056
- Bloch, F., & Charasz, N. (2014). Attitudes of older adults to their participation in clinical trials: A pilot study. *Drugs & Aging*, 31(5), 373–377. https://doi.org/10.1007/ s40266-014-0168-2
- Boase, J., & Ling, R. (2013). Measuring mobile phone use: Self-report versus log data. Journal of Computer-Mediated Communication, 18(4), 508–519. https://doi. org/10.1111/jcc4.12021
- Bouwman, H., de Reuver, M., Heerschap, N., & Verkasalo, H. (2013). Opportunities and problems with automated data collection via smartphones. *Mobile Media & Communication*, 1(1), 63–68. https://doi.org/10.1177/2050157912464492
- Caliandro, A. (2018). Digital methods for ethnography: Analytical concepts for ethnographers exploring social media environments. *Journal of Contemporary Ethnography*, 47(5), 551–578. https://doi.org/10.1177/0891241617702960
- Caliandro, A. (2021). Repurposing digital methods in a post-API research environment: Methodological and ethical implications. *Italian Sociological Review*, 11(4S), 225–242.
- Caliandro, A., & Gandini, A. (2017). Qualitative research in digital environments: A research toolkit. Routledge.
- Caliandro, A., Garavaglia, E., Sturiale, V., & Di Leva, A. (2021). Older people and smartphone practices in everyday life: An inquire on digital sociality of Italian older

users. The Communication Review, 24(1), 47–78. https://doi.org/10.1080/107144 21.2021.1904771

- Cecchini, M. (2019). Reinforcing and reproducing stereotypes? Ethical considerations when doing research on stereotypes and stereotyped reasoning. *Societies*, 9(4), 79. https://doi.org/10.3390/soc9040079
- Chen, Y.-R. R., & Schulz, P. J. (2016). The effect of information communication technology interventions on reducing social isolation in the elderly: A systematic review. *Journal of Medical Internet Research*, 18(1), e18. https://doi.org/10.2196/jmir.4596
- Chenail, R. J. (2011). Interviewing the investigator: Strategies for addressing instrumentation and researcher bias concerns in qualitative research. *Qualitative Report*, 16(1), 255–262. https://eric.ed.gov/?id=EJ914046
- Coleman, R. (2018). Designing experiments for the social sciences: How to plan, create, and execute research using experiments. Sage Publications.
- Comunello, F., Rosales, A., Mulargia, S., Ieracitano, F., Belotti, F., & Fernández-Ardèvol, M. (2020). "Youngsplaining" and moralistic judgements: Exploring ageism through the lens of digital "media ideologies". *Ageing & Society*, 1–24. https://doi. org/10.1017/S0144686X20001312
- Cuddy, A. J., Norton, M. I., & Fiske, S. T. (2005). This old stereotype: The pervasiveness and persistence of the elderly stereotype. *Journal of Social Issues*, 61(2), 267–285. https://doi.org/10.1111/j.1540-4560.2005.00405.x
- Dodds, S., & Hess, A. C. (2020). Adapting research methodology during COVID-19: Lessons for transformative service research. *Journal of Service Management*, 32(2), 203–217. https://doi.org/10.1108/JOSM-05-2020-0153
- Doyle, C., & Goldingay, S. (2012). The rise of the "silver surfer": Online social networking and social inclusion for older adults. *Journal of Social Inclusion*, 3(2), 40–54. https://doi.org/10.36251/josi.54
- Dunn, L. B., & Jeste, D. V. (2001). Enhancing informed consent for research and treatment. *Neuropsychopharmacology*, 24(6), 595–607. https://doi.org/10.1016/ S0893-133X(00)00218-9
- Eurostat (2020). Population and demography [Data set]. https://ec.europa.eu/ eurostat/web/population-demography
- Fernández-Ardèvol, M., Rosales, A., Loos, E., Peine, A., Beneito-Montagut, R., Blanche, D., & Östlund, B. (2019). Methodological strategies to understand smartphone practices for social connectedness in later life. In J. Zhou & G. Salvendy (Eds.), *International Conference on human-computer interaction* (pp. 46–64). Springer. https://doi.org/10.1007/978-3-030-22015-0_4
- Gershon, I. (2010). Media ideologies: An introduction. *Journal of Linguistic Anthropology*, 20(2), 283–293. https://www.jstor.org/stable/43104264
- Golomb, B. A., Chan, V. T., Evans, M. A., Koperski, S., White, H. L., & Criqui, M. H. (2012). The older the better: Are elderly study participants more nonrepresentative? A cross-sectional analysis of clinical trial and observational study samples. *BMJ Open*, 2(6), e000833. http://dx.doi.org/10.1136/bmjopen-2012-000833
- Grigorovich, A., Kontos, P., Jenkins, A., & Kirkland, S. (2021). Moving toward the promise of participatory engagement of older adults in gerotechnology. *The Gerontologist*, 62(3), 324–331. https://doi.org/10.1093/geront/gnab026
- Guaita, A., Colombo, M., Vaccaro, R., Fossi, S., Vitali, S. F., Forloni, G., Polito, L., Davin, A., Ferretti, V. V., & Villani, S. (2013). Brain aging and dementia during the transition from late adulthood to old age: Design and methodology of the

"Invece. Ab" population-based study. BMC Geriatrics, 13(1), 1–9. https://doi.org/10.1186/1471-2318-13-98

- Harrits, G. S., & Møller, M. (2021). Qualitative vignette experiments: A mixed methods design. *Journal of Mixed Methods Research*, 15(4), 526–545. https://doi. org/10.1177/1558689820977607
- Herzog, A. R., & Rodgers, W. L. (1988). Age and response rates to interview sample surveys. *Journal of Gerontology*, 43(6), S200–S205. https://doi.org/10.1093/ geronj/43.6.S200
- Hine, C. (2005). Virtual methods: Issues in social research on the Internet. Berg Pub Limited.
- Howlett, M. (2021). Looking at the "field" through a Zoom lens: Methodological reflections on conducting online research during a global pandemic. *Qualitative Research*, 22(3), 387–402. https://doi.org/10.1177/1468794120985691
- Iversen, S. M., & Wilinska, M. (2020). Ageing, old age and media: Critical appraisal of knowledge practices in academic research. *International Journal of Ageing and Later Life*, 14(1), 121–149. https://doi.org/10.3384/ijal.1652-8670.18441
- Kobakhidze, M. N., Hui, J., Chui, J., & González, A. (2021). Research disruptions, new opportunities: Re-imagining qualitative interview study during the COVID-19 pandemic. *International Journal of Qualitative Methods*, 20. https:// doi.org/10.1177/16094069211051576.
- Lawrence, L. (2022). Conducting cross-cultural qualitative interviews with mainland Chinese participants during COVID: Lessons from the field. *Qualitative Research*, 22(1), 154–165. https://doi.org/10.1177/1468794120974157
- Levy Paluck, E. (2010). The promising integration of qualitative methods and field experiments. *The ANNALS of the American Academy of Political and Social Science*, 628(1), 59–71. https://doi.org/10.1177/0002716209351510
- Lewis-Beck, M., Bryman, A. E., & Liao, T. F. (2004). *The Sage encyclopedia of social science research methods*. Sage Publications.
- Lo, M. C. M., & Fan, Y. (2021). How narratives of disaster impact survivors' emotionality: The case of typhoon Morakot. *Poetics*, 101579. https://doi.org/10.1016/j. poetic.2021.101579
- Lobe, B., Morgan, D., & Hoffman, K. A. (2020). Qualitative data collection in an era of social distancing. *International Journal of Qualitative Methods*, 19, 160940692093787. https://doi.org/10.1177/1609406920937875.
- Loos, E., Haddon, H., & Mante-Meijer, E. (2012). *Generational use of new media*. Ashgate Publishing.
- Madianou, M., & Miller, D. (2013). Polymedia: Towards a new theory of digital media in interpersonal communication. *International Journal of Cultural Studies*, 16(2), 169–187. https://doi.org/10.1177/1367877912452486
- Mannheim, I., Schwartz, E., Xi, W., Buttigieg, S. C., McDonnell-Naughton, M., Wouters, E. J. M., & van Zaalen, Y. (2019). Inclusion of older adults in the research and design of digital technology. *International Journal of Environmental Research* and Public Health, 16(19), 3718. https://doi.org/10.3390/ijerph16193718
- Marston, H. R., Musselwhite, C., & Hadley, R. (2020). COVID-19 vs social isolation: The impact technology can have on communities, social connections and citizens. *Aging Issues*. Retrieved from: https://ageingissues.wordpress. com/2020/03/18/covid-19-vs-social-isolation-the-impact-technology-can-haveon-communities-social-connections-and-citizens/?fbclid=IwAR30zMJujZfWFBIm QR6V_wLJWlnHBrUYq21_SgTBS9qQ7Hgl9jkQ-_BU9kg

- Melis, G., Sala, E., & Zaccaria, D. (2021a). Remote recruiting and video-interviewing older people: A research note on A qualitative case study carried out in the first COVID-19 red zone in Europe. *International Journal of Social Research Methodol*ogy, 25(4), 477–482. https://doi.org/10.1080/13645579.2021.1913921
- Melis, G., Sala, E., & Zaccaria, D. (2021b). «I turned to Facebook to know when they would open the cemetery». Results from a qualitative case study on older people's social media use during COVID-19 lockdown in Italy. *Rassegna Italiana di Sociologia*, 62(2), 431–457. https://doi.org/10.1423/101851
- Melis, G., Sala, E., & Zaccaria, D. (2022). The role of information and communication technologies in researching older people during the COVID-19 pandemic. in Q. Gao & J. Zhou (Eds.), *International Conference on Human-Computer Interaction*, pp. 53–68, Springer.
- Merkel, S., & Kucharski, A. (2019). Participatory design in gerontechnology: A systematic literature review. *The Gerontologist*, 59(1), e16-e25. https://doi.org/10.1093/geront/gny034
- Millward, P. (2003). The "grey digital divide": Perception, exclusion and barriers of access to the Internet for older people. *First Monday*, 8(7). https://firstmonday.org/ojs/index.php/fm/article/view/1066
- Moran, L., & Caetano, A. (2021). Biographical research through the looking glass of social distancing: Reflections on biographical interviewing and online technologies in pandemic times. *Irish Journal of Sociology*, 30(2), 209–2013. https://doi. org/10.1177/07916035211022182
- Newman, P. A., Guta, A., & Black, T. (2021). Ethical considerations for qualitative research methods during the COVID-19 pandemic and other emergency situations: Navigating the virtual field. *International Journal of Qualitative Methods*, 20. https://doi.org/10.1177/16094069211047823
- Ng, R., & Indran, N. (2022). Reframing aging during COVID-19: Familial role-based framing of older adults linked to decreased ageism. *Journal of the American Geriatrics Society*, 70(1), 60–66. https://doi.org/10.1111/jgs.17532
- Payne, G., & Payne, J. (2004). Key concepts in social research. Sage Publications.
- Peine, A., & Neven, L. (2021). The co-constitution of ageing and technology a model and agenda. *Ageing & Society*, 41(12), 2845–2866. https://doi.org/10.1017/S0144686X20000641
- Pentaris, P., Willis, P., Ray, M., Deusdad, B., Lonbay, S., Niemi, M., & Donnelly, S. (2020). Older people in the context of COVID-19: A European perspective. *Journal* of Gerontological Social Work, 63(8), 736–742. https://doi.org/10.1080/01634372. 2020.1821143
- Poli, A., Kelfve, S., Berg, K., & Motel-Klingebiel, A. (2021). Old-age diversity is underrepresented in digital health research: Findings from the evaluation of a mobile phone system for post-operative progress monitoring in Sweden. *Ageing and Society*, 1–23. https://doi.org/10.1017/S0144686X21001641
- Prowse, M., & Camfield, L. (2013). Improving the quality of development assistance: What role for qualitative methods in randomized experiments? *Progress in Development Studies*, 13(1), 51–61. https://doi.org/10.1177/146499341201300104
- Richardson, S. J., Carroll, C. B., Close, J., Gordon, A. L., O'Brien, J., Quinn, T. J., & Witham, M. D. (2020). Research with older people in a world with COVID-19: Identification of current and future priorities, challenges and opportunities. *Age* and Ageing, 49(6), 901–906. https://doi.org/10.1093/ageing/afaa149

- Roberts, J. K., Pavlakis, A. E., & Richards, M. P. (2021). It's more complicated than it seems: Virtual qualitative research in the COVID-19 era. *International Journal of Qualitative Methods*, 20. https://doi.org/10.1177/16094069211002959
- Rogers, R. (2017). Foundations of digital methods: Query design. In M. T. Schäfer, & K. van Es (Eds.), *The Datafied Society. Studying culture through data* (pp. 75–94). Amsterdam University Press.
- Rogers, R. (2019). Doing digital methods. Sage.
- Rosales, A., & Fernández-Ardèvol, M. (2019). Smartphone usage diversity among older people. Smartphone usage diversity among older people. In S. Sayago (Ed.), *Perspectives on human-computer interaction research with older people* (pp. 51–66). Springer.
- Rosales, A., & Fernández-Ardèvol, M. (2020). Ageism in the era of digital platforms. *Convergence*, 26(5–6), 1074–1087. https://doi.org/10.1177/1354856520930905
- Saberi, P. (2020). Research in the time of coronavirus: Continuing ongoing studies in the midst of the COVID-19 pandemic. *AIDS and Behavior*, 24(8), 2232–2235. https://doi.org/10.1007/s10461-020-02868-4
- Sala, E., & Gaia, A. (2019). Older People's use of «Information and communication technology» in Europe. The Italian case. *Autonomie locali e servizi sociali*, 2(2019), 163–183. https://doi.org/10.1447/95863
- Salganik, M. J. (2018). *Bit by bit. Social research in a digital age*. Princeton University Press.
- Silva, M. F., Silva, D. S. M. D., Bacurau, A. G. D. M., Francisco, P. M. S. B., Assumpção, D. D., Neri, A. L., & Borim, F. S. A. (2021). Ageism against older adults in the context of the COVID-19 pandemic: An integrative review. *Revista de saude publica*, 55. https://doi.org/10.11606/s1518-8787.2021055003082
- Steils, N. (2021). Qualitative experiments for social sciences. New Trends in Qualitative Research, 6, 24–31. https://doi.org/10.36367/ntqr.6.2021.24-31
- Stier, S., Breuer, J., Siegers, P., & Thorson, K. (2020). Integrating survey data and digital trace data: Key issues in developing an emerging field. *Social Science Computer Review*, 38(5), 503–516. https://doi.org/10.1177/0894439319843669
- Swift, H. J., Abrams, D., Marques, S., Vauclair, C. M., Bratt, C., & Lima, M.-L. (2018). Ageism in the European region: Finding from the European social survey. In L. Ayalon, & C. Tesch-Römer (Eds.), *Contemporary perspectives on ageism* (pp. 441–459). Springer.
- Sy, M., O'Leary, N., Nagraj, S., El-Awaisi, A., O'Carroll, V., & Xyrichis, A. (2020). Doing interprofessional research in the COVID-19 era: A discussion paper. *Journal* of *Interprofessional Care*, 34(5), 600–606. https://doi.org/10.1080/13561820.2020. 1791808
- Taipale, S., & Farinosi, M. (2018). The big meaning of small messages: The use of WhatsApp in intergenerational family communication. In J. Zhou & G. Salvendy (Eds.), *Human aspects of IT for the aged population: Acceptance, communication and participation* (pp. 532–546). Springer. https://doi.org/10.1007/978-3-319-92034-4_40
- Troyna, B., & Carrington, B. (2005). Whose side are we on? Ethical dilemmas in research on "race" and education. In R. G. Burgess (Ed.), *The ethics of educational research* (pp. 205–223). Falmer Press.
- Van Hoof, J., Verboor, J., Oude Weernink, C. E., Sponselee, A. A. G., Sturm, J. A., Kazak, J. K., Govers, G. M. J., & Van Zaalen, Y. (2018). Real-time location systems for asset management in nursing homes: An explorative study of ethical aspects. *Information*, 9(4), 80. https://doi.org/10.3390/info9040080

- Van Spall, H. G., Toren, A., Kiss, A., & Fowler, R. A. (2007). Eligibility criteria of randomized controlled trials published in high-impact general medical journals: A systematic sampling review. *Jama*, 297(11), 1233–1240. https://doi.org/10.1001/ jama.297.11.1233
- Vincent, J. (2023). Life stage or age? Reviewing perceptions of oldest ICT users. In A. Rosales, M. Fernández-Ardèvol, & J. Svensson (Eds.), *Digital ageism: How it operates and approaches to tackling it*. Routledge.
- Zaccaria, D., Guaita, A., Vaccaro, R., Casanova, G., Abbondanza, S., Pettinato, L., Cerati, G., Rolandi, E., & Sala, E. (2020). Assessing the impact of social networking site use on older people's loneliness and social isolation. A randomized controlled trial: The Aging in a Networked Society-Social Experiment Study (ANS-SE). *Contemporary Clinical Trials Communications*, 19, 100615. https://doi.org/10.1016/j. conctc.2020.100615
- Zwijsen, S. A., Niemeijer, A. R., & Hertogh, C. M. (2011). Ethics of using assistive technology in the care for community-dwelling elderly people: An overview of the literature. *Aging & Mental Health*, 15(4), 419–427. https://doi.org/10.1080/13607863.2010.543662