Ageing and the digital life course, edited by David Prendergast and Chiara Garattini. Pp.ix-289. Berghahn Books 2015, £75.00. ISBN 9781782386919 Hardback.

This excellent collection of readings addresses the role of technology in an ageing society, mainly through the eyes of social scientists and medical researchers using ethnographic studies of technology use. Falling broadly into the field of gerontechnology, the writings are concerned with the use of technology to improve the health and wellbeing of older people in particular. However, unlike many works in that area, they are critical of overly optimistic predictions about the value of new technologies, and more realistic about the challenges of making technology accessible, attractive and useful to people, and having it fit within everyday behaviours and broader healthcare systems. At the same time, the empirical attention to the use of technology, explodes numerous myths about the reticence of older people to engage with it. The book shows many older people to be frequent users of email and social networking systems, avid gamers, on-line shoppers and web surfers; open to exotic developments such as social robots and concerned about the inheritance of digital possessions when they die.

An insight into the theoretical and empirical orientation of the book is given by the story of its commissioning told in the Acknowledgements section. The editors David Prendergast and Chiara Garattini were both anthropologists at Intel Labs Digital Health Group when they were invited to prepare a book on the topic of ageing and technology. The book is the third volume in a new series for Berghahn Books managed by Jay Sokolovsky on 'Life course, culture and ageing: Global transformations'. It is also sponsored by the Association for American Anthropology and Gerontology (AAGE). This anthropological orientation led by the editors Prendergast and Garattini leads to a cross-cultural combination of work in the book from Europe, the US and Japan, which is sensitive to the institutional as well as the social and psychological contexts of technology use. It also focuses on **ageing** as a process rather than on older people as a distinct population, as explained in the editors' introduction: "*It is our aim to be part of a literature on ageing that counteracts stigma and problematic simplification of 'old people'. Instead we want to conceptualise ageing as a diversified process that does not bend to superficial definitions*" p8. They apply a similar critique to the notion of **technology** which is said not only to be diversified beyond particular classes such as 'the internet', 'mobile', 'telecare' and so on, but also socially constructed and shaped by its domestication into the everyday life routines of its users. The individual chapters of the book echo this understanding. They show in different ways how various technologies are appropriated in the later stages of life to address challenges of ageing such as loneliness and connectivity (Part 1), health and independent living (Part 2) and retirement, recreation and inheritance (Part 3).

For example in Part 1 (Connections, Networks and Interactions), Stafford explores the World Health Organisation notion of an age-friendly community in Chapter 1, and its facilitation through online communities. He shows how the Tyze online Network grew out of the PLAN offline network to support adults with developmental disabilities. The premise of both systems is to grow and nurture the social networks of such adults as they age, and social networking technology in the form of Tyze was recruited to help with this in 2007, 18 years after the PLAN network was formed. The system supports volunteering, befriending and communication both online and offline, and attracts older people as volunteers as well as recipients of support. This is a great initial example of the complexity of technology use by

older people and the way it relates to broader motivations and communities in the physical world. The following two chapters reinforce this lesson. Tetley et al in Chapter 2 report findings from an EU project called Opt-in. This sought to create opportunities for older people to play with a range of new technologies in facilitated workshops across four European countries. The intervention was useful in getting them to reflect on their attitudes to new technology and to learn from each other in a social environment, rather than struggling to engage alone at home. Singh's Chapter 3 on the use of 'constant contact media', took the opposite use case of 22 individuals trying to connect frequently with others through social networking systems. Their experiences are illustrated through detailed portraits of two users, Thomas (60) and Patsy (68), showing how the strong motivation to keep in touch with distant family and friends in isolated settings led to mastery over Facebook, Skype, email and SMS as 'lifelines' to a real-time sense of connectedness with the outside world. In a change of tack in Chapter 4, Neven & Leeson consider the reactions of two sets of older people to two social robots designed as domestic companions. iRo was a cartoon-like robot who could be an opponent or partner on various digital board games, while PARO was a robotic pet seal which responded non-verbally to speech and touch. Older people's groups in the Netherlands and Japan were presented with iRo and PARO in laboratory, home or nursing home settings. Their reactions varied across settings as much as between robots. iRo was considered stigmatising in the lab tests, but became more acceptable and personalised at home where it was shown off to visitors and used to kill time. PARO was passed around a group of residents in the lounge of a Japanese nursing home, and served to stimulate group banter and activity, at least for some of the residents. What were designed as personal technologies for human-robot interaction, appeared to become vehicles for socialising with other humans.

The appropriation of technologies for Health and Wellbeing are discussed in Part 2 of the book. While individual studies are reported, most chapters in this section review multiple literatures and make methodological points about how to research, design or deploy technologies in this category. Hence Wherton et al in Chapter 5 review a range of approaches to alleviating loneliness, and promote design ethnography and co-design to maximise the chance of developing appropriate and accessible technology. Dinsmore in Chapter 6 recommends a behavioural change approach to introducing self-management tools in chronic illness. Astell in Chapter 7 summarises the various aspects of living with dementia and reports a system called CIRCA designed to address communication problems and stimulate conversation. Her main point is to tailor technology to specific aspects of complex healthcare conditions, in a user-centred way. This is badly needed in home telehealth, which is the subject of the next Chapter 8 by Delaney & Sommerville. This is a catch-all term for systems which monitor patients' medical conditions at home and deliver care remotely. The authors discuss the gap between innovation and mainstream deployment of telehealth technologies and the importance of clinical evidence in establishing benefits. In Chapter 9, Lopez and Sanchez-Criado report an ethnographic study of installation engineers attempting to equip Spanish homes with social alarms. This reveals difficulties in the definition of users, the selection of locations for the equipment and the naming of contacts to be alerted in different scenarios of use. The authors recommend greater attention to 'installation problems' as a way of understanding the wiring of "*domestic architectures, dwelling practices and aesthetic preferences*" as well as physical pieces of technology (p192).

In Part 3 (Life Course Transitions) the final four chapters cover the role of technology in four situations often thrown up in older age: caring for a loved one, moving house in retirement, having time on your hands to play, and rationalising both physical and digital possessions for inheritance. Hence in Chapter 10, Iris and Berman discuss the usefulness of a medical

advice website for carers in the context of evaluating one called e-Careonline. The system was found to improve the perceived competence and confidence of caregivers as well as validating the importance of their role. However, the user experience was affected by detailed content and interaction design choices, which the authors discuss at the end of the chapter. In Chapter 11 Ono reports a social phenomenon in Japan of older people migrating to Malaysia for their retirement. This trend is apparently encouraged not only by the 'Malaysia-my-second-home' policy, but also by the sharing of stories of migration online. Although referred to as 'digital stories' the examples are mainly text blogs and most discussion centres on the implications for reconfiguring family relationships and caring obligations. In Chapter 12 De Schutter et al review the role of digital games in the lives of older adults from the audience studies literature. An increasing number of older people are becoming part of the global gaming community as they try out new digital games and as younger gamers age. The motivations are varied, but include the desire to respond to a challenge, feelings of control and accomplishment, social interaction and self-improvement. There is a preference for puzzle games, adaptation or simulation of traditional games and web-based games. In Chapter 13 Moncur discusses another phenomenon emerging in the older population, which is a concern for the inheritance of digital as well as physical possessions. This is a new issue raised by the sharing of digital content in a variety of forms, and the traces left by a virtual life lived online. It is currently difficult for a virtual presence to die online, and to actively bequeath digital assets in law. This suggests the need for new social policies, legal structures and software solutions in this area.

Digital death and inheritance might be seen as a final phase in a digital life course. This notion is never really unpacked explicitly in the book, nor is it used to organise chapters stretching from birth to death. However, it becomes clear from the chapters that technology use changes at later stages of life, as children leave home and paid work diminishes in importance. Other priorities and challenges appear that privilege some technologies over others, and people continue to fight with the ever-changing landscape of technology to understand its benefits and realise its potential in their later, as in their earlier lives. So the main lesson is true to the title of the book in showing that both people and technologies age, and that design and use are a kind of virtuous circle which operates to bring them into alignment, if only for a moment of fun or joyful connection or remote act of kindness. Attention to people's own (ethno) understandings and experiences of technology, and the role it plays in the wider culture, is critical to both inclusive and effective design. Both aspects are promoted by this book which is the ethnographer's take on gerontechnology.

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