

Arlene Astell · David Clayton

AgeTech for Staying Connected





Synthesis Lectures on Technology and Health

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The series includes a subseries of books published in partnership with Canada's AGE-WELL that specifically addresses their 8 AgeTech Challenge Areas. Each lecture introduces the context in which the technology is used—wellness, health, medicine, special needs, or other contexts. Authors present and explain the technology and review promising applications and opportunities as well as limitations and challenges. They include material on their own work while surveying the broader landscape of related research, development, and impact.

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AGE-WELL (www.agewell-nce.ca) is Canada's Technology and Aging Network. The pan-Canadian network brings together researchers, older adults, caregivers, partner organizations, and future leaders to accelerate the delivery of technology-based solutions that make a meaningful difference in the lives of Canadians. AGE-WELL researchers are producing technologies, services, policies, and practices that improve quality of life for older adults and caregivers, and generate social and economic benefits for Canada. AGE-WELL's work is supported through Government of Canada funding programs.

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Introduction 1



Image 1.1 Credit David Tett/Ageing Better

1.1 Staying Connected with AgeTech

Humans are social beings who are born ready to connect with others. Throughout our lives we are sustained by our connections with other people: our relationships with family and friends, lovers and colleagues, teammates and classmates, communities and societies all define who we are and shape our sense of self. Cut off from others we experience

2 1 Introduction

loneliness and social isolation that can lead to depression, poor health and increased risk of cognitive impairment or death.

Multiple personal, social, and economic reasons make staying connected essential for living and aging well. On an individual level, our mental health and well-being are strongly influenced by our relationships and connectedness with other people. People need to feel connected to others and in the presence of those who they like, trust and can be together with (Cacioppo & Patrick, 2008). Socially, close relationships contribute to our identity and place in the world—they confirm our roles such as partner, parent, friend, or colleague. Feeling connected, having people to interact with, and opportunities to do so contribute to our feeling of being in the social world. As we age various factors, such as loss of close family and friends, family living further away, reduced opportunities to make new relationships, and declining health or mobility may all contribute to fewer and less frequent social interactions.

Technology offers many ways for people to stay connected and can be particularly useful for older adults (Image 1.1). AgeTech is a recent term for technologies that benefit older adults. However, this term is not universally accepted, with critics arguing that designing exclusively for older adults lacks inclusivity in design and risks perpetuating ageist stereotypes (Briscoll & Carroll, 2021). Advocates propose that AgeTech encapsulates a holistic approach to the needs and wants of older adults that will produce technologies to enhance increasing life expectancy (Rubeis et al., 2022).

Within this book series, AgeTech is applied broadly to the range of technologies being created or leveraged to empower individuals in their later lives. In the realm of staying connected, this includes information and communication technologies (ICTs), robotics, mobile technologies, artificial intelligence (AI), augmented reality (AR) and virtual reality (VR), and smart home systems. The wide range of current and emerging AgeTech offers great potential to meet growing global demands for keeping people connected as they age, reduce loneliness and social isolation and improve their well-being. However, AgeTech can also present challenges and the potential to disadvantage and exclude older people further if they lack the resources and right support to access AgeTech. This book aims to present examples of AgeTech research and innovation alongside the challenges that need to be tackled to empower older adults to stay connected.

1.1.1 Staying Connected is Essential to Well-Being

Loneliness and social isolation are linked with poor mental health, an issue which was highlighted by the COVID-19 pandemic. Loneliness and social isolation are also linked to physical health and morbidity as well as increasing the risk of cognitive decline associated with dementia. Loneliness has specifically been associated with an increased risk of mortality (Perissinotto et al., 2012), with some estimates suggesting the impact on mortality is comparable to smoking and alcohol consumption (Holt-Lunstad et al., 2010).