

## Chapter 53

# Life–Long Collections: Motivations and the Implications for Lifelogging With Mobile Devices

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### ABSTRACT

*In this paper the authors investigate the motivations for life-long collections and how these motivations can inform the design of future lifelog systems. Lifelogging is the practice of automatically capturing data from daily life experiences with mobile devices, such as smartphones and wearable cameras. Lifelog archives can benefit both older and younger people; therefore lifelog systems should be designed for people of all ages. The authors believe that people would be more likely to adopt lifelog practices that support their current motivations for collecting items. To identify these motivations, ten older and ten younger participants were interviewed. It was found that motivations for and against life-long collections evolve as people age and enter different stages, and that family is at the core of life-long collections. These findings will be used to guide the design of an intergenerational lifelog browser.*

DOI: 10.4018/978-1-5225-5484-4.ch053

## INTRODUCTION

In this work we are concerned with people's motivations for life-long collections and the implications for lifelogging with mobile devices. Lifelogging is the digital capture of life experiences typically through mobile sensors or devices. Lifelogging is a relatively new concept with early pioneers such as Steve Mann concentrating on making wearable devices smaller and smaller (Mann, 2012). Lifelogging devices, such as wearable cameras (Figure 1), have been shown to support reflection and story-telling within family groups (Byrne & Jones, 2009; Lyndley et al., 2009) and lifelog collections, such as emails, photographs, and context data (e.g. GPS) also have the potential to support reminiscence (Kikhia, Hallberg, Bengtsson, Sävenstedt, & Synnes, 2010). Digitally archiving into old age would mean that we could review a lifetime of events, from everyday routine activities to significant occasions. Recording and reviewing one's life can be therapeutic for an individual, and allows an older person to leave a legacy for their family to remember them by, and to remember the generations before them. It is now possible to record thousands of photographs per day, videos, dietary logs, emails, music preferences and so on. Until recently the SenseCam (see Figure 1 for examples of wearable devices) has been the only viable option as an automated wearable camera, being small, compact and more or less unobtrusive. The device is a lightweight camera, worn around the neck, capturing up to three thousand images per day without any user intervention. However recent developments have seen the release of the Autographer ([www.autographer.com](http://www.autographer.com)) and Memoto (<http://memoto.com/>), which include integrated GPS and longer battery life. A short leap from these devices are wearable computers, which record information from the environment and display it back to the wearer in real time, such as augmented reality glasses, Google Glass ([www.google.com/glass](http://www.google.com/glass)).

It has been proposed that ubiquitous smartphones can provide a more accessible alternative to automated wearable cameras such as the SenseCam (Gurrin et al., 2013). Although smart phones are primarily designed for handheld interaction, with the gradual reduction in size and weight, it is believed that the "wearability" will increase. According to Gurrin et al., smartphones hold several advantages over automated wearable cameras. For example, they encompass a range of on-board sensors (such as accelerometer, compass, camera, GPS, WiFi and Bluetooth etc.), they are more ubiquitous, cost effective and familiar for users, they can support real-time analysis of sampled life-experiences, and they have the ability to act as both the data-gathering device and the data-display and feedback device. According to a PEW Research Centre report, 66% of people aged 18-29, and 59% aged 30-49 years own a smartphone, however older adults are slower to adopt the technology with only 34% aged 50-64, and 13% of 65 years and older owning a smartphone (Smith, 2012). In a previous study on older and younger people's everyday use of technology, we found that although older adults' use of mobile phones was limited to basic functions, such as making calls and sending text messages, supporting the findings of previous studies (Kurniawan, 2008), the camera function was also commonly used by older adults aged 50-64 years, with 70% using this function. This suggests that there is potential for the adoption of mobile phones as visual lifelogging devices by both younger and older people.

One of the challenges of using a smartphone as a lifestyle capture device is preserving battery power. However, several efforts are underway to increase the battery life of these mobile devices to support lifelogging, allowing automatic capture of events throughout a whole day (De Jager et al., 2011; Qiu, Gurrin, Doherty, & Smeaton, 2012). We are moving ever closer to the day when lifelogging will be automatic and unobtrusive, recorded by discrete wearable or mobile sensors without manual intervention, and wirelessly transferred to a digital storage facility in the cloud.

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