
An Introduction to Charting the Digital Lifespan

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Abstract

Charting the Digital Lifespan (CDL) is a two-year programme of research that is producing unique insights into the digital lifespan of UK citizens both now and in a future where our young Digital Natives will encounter digital dimensions to key transition points in the human lifespan – becoming an adult, becoming a parent, retiring from work. In this paper, we provide an overview of the CDL project to contribute to discussions with the CHI community about how major life events shape and are shaped by human computer interaction.

Author Keywords

Digital personhood; digital lifespan; digital citizenship; interdisciplinary HCI.

ACM Classification Keywords

H K3.2 Digital Literacy.

Introduction

Charting the Digital Lifespan (CDL) is a two-year interdisciplinary project, involving partners at five UK universities (Dundee, Newcastle, Surrey, Nottingham and Heriot-Watt) to critically explore the concept of the Digital Lifespan (DL). Combining expertise in anthropology, cultural studies, interaction design, computer vision, and machine learning, the CDL project considers what it means for individuals to 'live out'

digitally mediated lives across the human lifespan – from birth, and specially to understand the implications of people’s digital interactions for self-identity creation and management across the lifespan. The project was motivated by recent discourse about the changing nature of personhood in the Digital Age, highlighting that empirical understanding about ‘digital personhood’ is “increasingly important for effective policy making and implementation” [1]. As such, the project is timely: the notion of a DL is becoming a reality, and yet the implications of interacting with it for UK citizenship and self-representation in a digitally mediated world are not yet understood, or even *articulated*.

Conceptualising the Digital Lifespan

Whilst it is an increasingly commonplace observation that people “live online”, we have yet to experience a complete lifespan in the Digital Age, from conception to death in old age. Those who have grown up interacting with digital technology from a very early age are still relatively young, whilst older technology adopters have identities that pre-date the Digital Age, populated with paper trails of memories. Many citizens have only a limited awareness of the permanency and consequence of posting in public and extended social circles. For example, digital posts from student or teenage years - reflecting opinions or behaviour that seemed socially appropriate at that time - may not reflect well in future professional life. Whilst the lifelong digital trails generated in the course of our digitally mediated interactions may echo our physical lives, the DL can persist indefinitely with no legal ‘right to be forgotten’ [2]. Arguably, the rich personal context that the DL provides may be harnessed in ways an individual might not expect or desire [8].

Project aims

In this RCUK-funded research, we aim to explore the concept of the DL to produce unique insights into the digital interactions of UK citizens across the human lifespan, generating social, cultural and technical insights to inform digital literacy, technology innovation, and UK policy making. To understand how individuals make sense of digital personhood *across* the lifespan, we are gathering multiple perspectives on the DL by UK citizens of differing generations who have interacted with digital technology in differing ways at different stages of their lives. In turn, our objective is to capture a rich picture about digital personhood as it is experienced at the current time, and as it is envisioned in a future where Digital Natives approach adulthood, become parents, and retire.

To this end we have set out to ‘chart’ the unmapped territory of the DL. Through collaborative mapping activities *across* the project, we aim to articulate and develop in visual form the conceptual space of the DL, and how people depict their online personal data trails in relation to their unfolding life experiences ‘offline’.

This conceptual exploration is grounded in a series of empirical studies with UK citizens about digital personhood at three transition points in their lives: coming of age, becoming a parent, and retiring from work.. Our three research populations are described as follows:

- Young Adults: We are working with young adults [aged 18-22] transitioning from school to university/ college/ work or unemployment.
- New Parents: We are working with first-time parents with a child aged from 0 to 2 years old.

- Retirees: We will work with adults who have retired recently.

Our empirical studies are conducted along various disciplinary strands, combining social scientific inquiry with design and computer science to produce socio-technical understandings and implications, which, in conjunction with the chart of the DL, will be further explored with policymakers and industry representatives.

The knowledge and insight developed from the CDL project aims to make impact by raising digital literacy at a key point in time when UK citizens themselves recognise that their futures will increasingly be mediated by the Internet [6]. Beyond individual citizens, our work aims to inform educators and policymakers by providing a deeper understanding of what it means to live as a UK citizen in a Digital Age. Whilst our focus is on the UK, it is reasonable to anticipate that our findings will generalize beyond the UK, to other digitally engaged developed countries.

Methodology

The research takes a broad pragmatic, empirical approach, drawing from an Experience-Centred Design (ECD) methodology [9] to deliver outcomes that aim to improve the lived experience of digital personhood by our research populations, supported by technological innovation. It is a mixed-methods, practice-based work programme, characterised by doing 'research through design' [10] to generate social, cultural and technical insights.

Studying the DL as an emerging and 'unmapped' phenomenon calls for a methodological orientation that embraces both the world as it is *currently* experienced

and 'as it could be' experienced *in the future* [3]. Methods of inquiry must therefore make sense of the DL as it is both experienced and 'envisioned', capturing multi-generational perspectives on digital personhood across the human lifespan that may be grounded in *or beyond the scope of* individuals' lived experiences. With this in mind, we aim to deliver methodological innovation to extend current discourse about the study of experience in HCI.

As we begin this research, we draw on approaches from digital anthropology [4] to gather perspectives from those already 'living online'. We are creating visual representations of participants' self-reported connections between online and offline places. The anthropological work utilizes novel digital and online tools developed by our technical partners to help engage with and collect data from research participants.

To complement this work, design fiction [3] workshops are stimulating speculation and creative thinking with research participants about possible technology applications for future interactions with the DL that may be *beyond* individuals' current lived experiences [7]..

As part of CDL, and in keeping with our 'research through design' approach, we are designing and developing new technologies for interacting with the DL. Within the research context, these serve a dual function: to promote reflection on DL interactions and to prototype novel DL visualisations and experiences. Conceptual designs and props support participant engagement with future storyworlds [3] in the design fiction workshops. Technology probes [5] are being designed and deployed in the context of field studies to

promote reflection on current DL interactions, and to experience and evaluate technological possibilities. Data mining studies investigate how data about individuals' DL interactions may be inferred and presented back to them, to further encourage creative thinking by both research participants and researchers about the DL concept.

Insights from these various research activities will be combined across the project timeframe to iteratively develop the chart of the DL. Interpreted as an interdisciplinary endeavour, the combined results will deliver a comprehensive empirical understanding of the DL – as lived and envisioned – to further inform technology innovation and UK policy making. The chart, as an additional deliverable, will represent a communicable summary – a rich picture – of how the DL is understood within our three research populations and across multi-generational perspectives. Methodological inquiry across the whole project will explore challenges and opportunities for sharing, interpreting and consolidating insights from the different disciplinary endeavours.

Conclusion

The interdisciplinary CDL project considers what it means for individuals to 'live out' digitally mediated lives across the human lifespan – from birth, and specially to understand the implications of people's digital interactions for self-identity creation and management across the lifespan. As we continue to move forward in this project, we welcome the opportunity to introduce our work to the CHI 2014 Workshop on Designing Technology for Major Life Events, and to contribute to community building in this space.

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