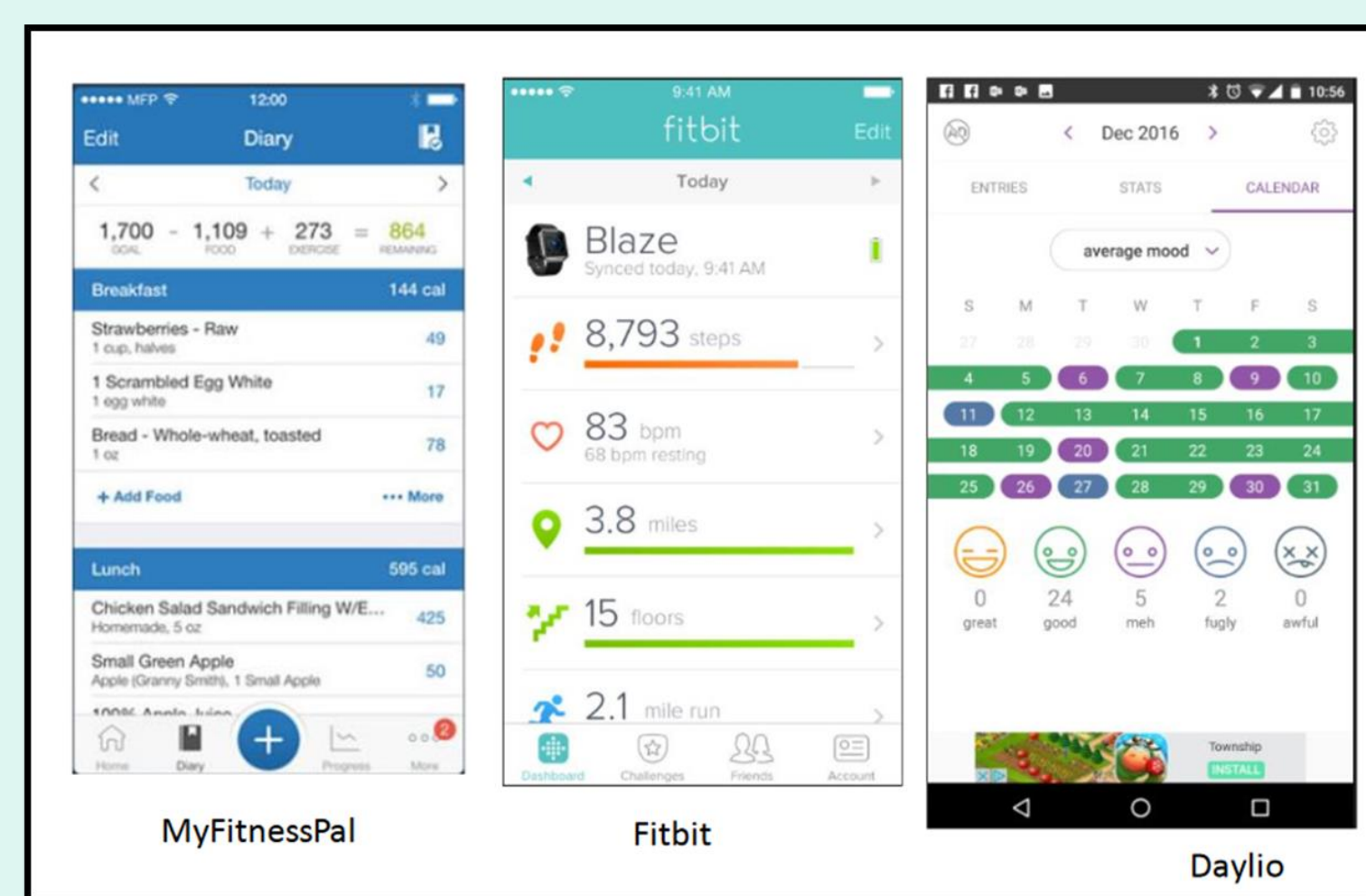
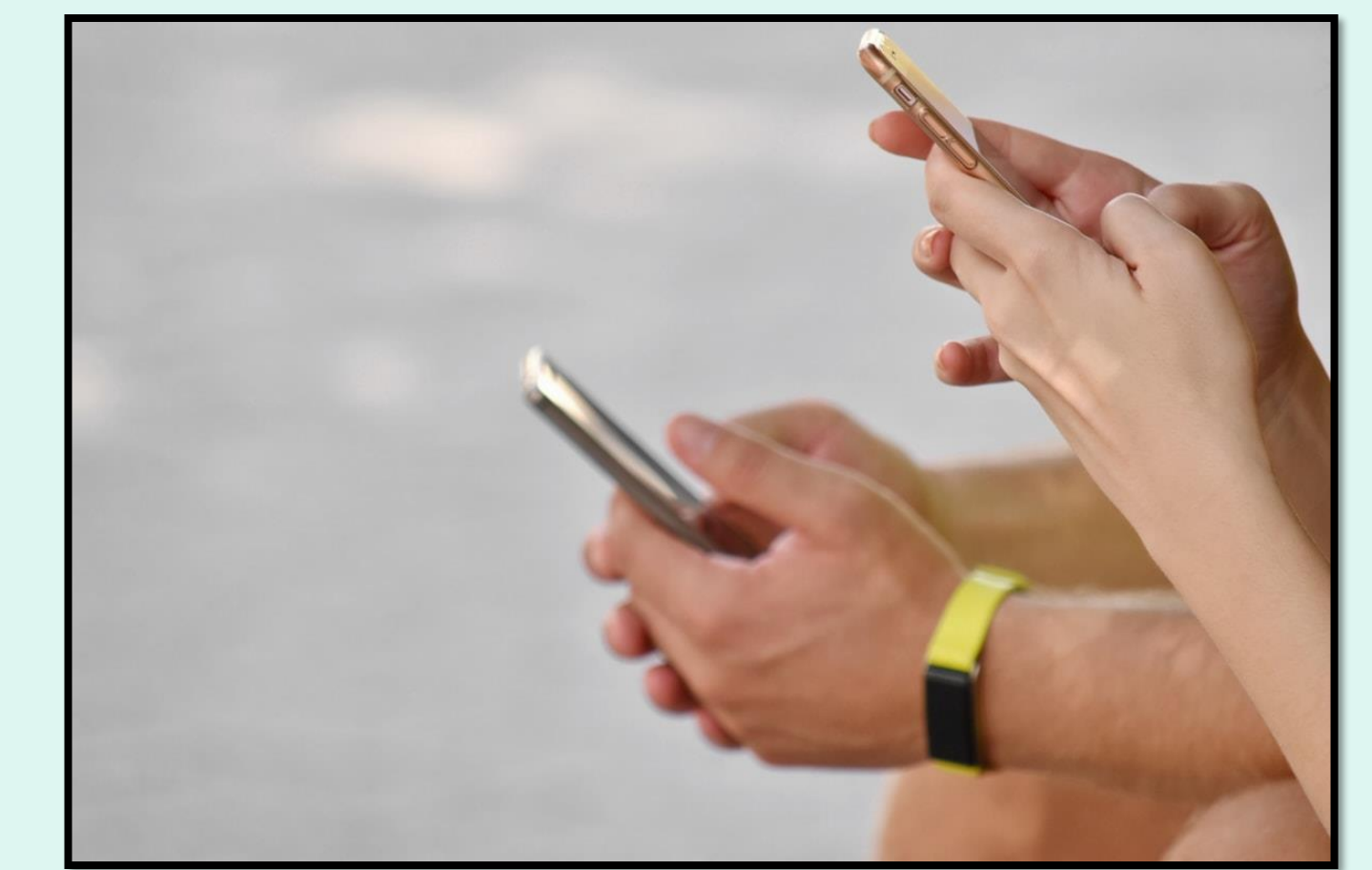


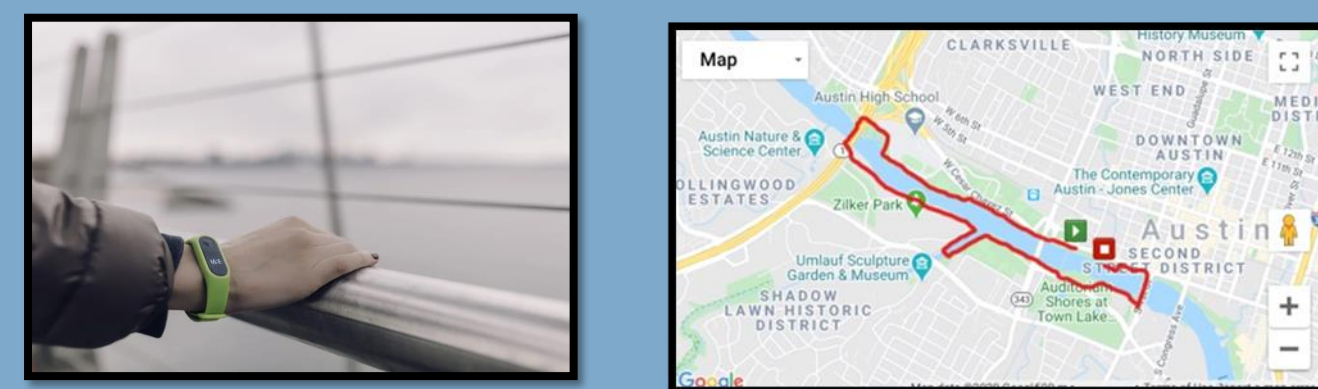
Documenting a Life Well-Tracked A Blueprint for the Quantified-Self Archive

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ABSTRACT

In the era of big data, the research and policy arenas are two areas where up-to-date assemblages of personal information have market value. In this study, we examined the long-term value of small data, acknowledging that there is also a societal need and an audience for rich, personalized collections of digital self-tracking records.



The findings reveal the value that people place on self-tracking data, their thoughts on proper modes for accessing their archive once it moves from a private to a public space, and how to provide fidelity within the system so that their experiences are represented while also enabling meaning making on the part of users of the archive.

From a design perspective, our research suggests that supporting long-term personal and societal use of self-tracking data necessitates that we take several points into consideration:

- We must design for shared responsibility of self-tracking data
- We must design for a broader understanding of the informational and evidential value of self-tracking data
- We must design for the partialness and partiality of self-tracking data
- We must design for mono and multi- provenance models of self-tracking data.

INTRODUCTION

With the rise of the smartphone in the 2000's, archivists are turning their attention to curating and making accessible evidence of human activity in the post-PC era. As one such form of mobile literacy, self-tracking data is poised to become a part of the historical and societal record. Stakeholder engagement is key to the process of understanding how to archive the mobile life – including those interested in understanding self-tracking in action (researchers, app developers, and self-trackers) and those interested in its curation (memory workers).

We begin such efforts with a study of self-trackers, examining the ways in which self-tracking data has perceived meaning and value in and after the life of the creator, including how such data could form part of the larger historical record, curated in an institutional archive. In doing so the research expands upon existing shared interests among researchers working in the areas of self-tracking, human-computer interaction, and archival science. Our research provides three main contributions to this literature:

- We extend the notion of self-tracking from that of a standalone practice, to one that can be understood as part of a complex, personal chronicling and recordkeeping regime in which people create, receive, use, and share documents in disparate ways over their lifetime.
- We present self-tracking as it exists along a continuum of lived experiences, one in which activities and interactions transform digital traces into information, records, evidence, and familial and social memory.
- We distinguish the design elements that support the long-term personal use of self-tracking data, as well as the subsequent archiving of self-tracking data for broader societal purpose.

RESEARCH DESIGN

Eighteen people who had self-tracked for six months or more were recruited for the study. Participants completed a survey which gathered demographic data and characteristics vis-à-vis their self-tracking behavior. In-person semi-structured interviews were then conducted and analyzed to ascertain the beliefs of the participants regarding the long-term use and value of personal quantified-self data.

SELECT FINDINGS

Emotive and Value Driven Aspects of the QS Archive

"I don't want to just die and be like, okay, that was [participant's name]. Bye. Like, I'd like people to be able to look up to me and ... I'd like to be someone else's goal." [P8]

Participants expressed a range of emotions when faced with the idea that their self-tracking data could one day be made accessible as part of a public archive. To consider this, participants had to be able to imagine a future in which aspects of themselves, and their data, were worthy of a public profile. In this way their data is seen not just as a proxy (imperfect though it is) for their identity as understood within a future family setting but as a placeholder for the self within a broader historical narrative. Yet reticence was also on show, with concomitant concerns to that of data serving as part of a family's digital legacy.

Articulating the Value of the QS Archive

Participants viewed some types and forms of self-tracking data as having insufficient value to warrant preservation in the archive. Data that fell within this category was limited in temporal scope and documented isolated activities deemed insufficiently interesting or all-encompassing. Despite the misgivings, participants were able to articulate ways in which their archived self-tracking data would have long-term value in a public setting. This was most evident when participants thought about the data holistically and longitudinally.

Overall Design Considerations for the QS Archive

"Like I mentioned a little bit earlier [social media] gives kind of meaning to all of the in between points of what the self-tracking kind of data ... pertains to... And then I think the other thing would just be... my calendar app as well... Just to kind of see as the day kind of progresses... what that self-tracking data is reflective of... Just about everything that I do for the most part, or major kind of important meetings, whatever it is, that's on my calendar." [P9]

Participants had an emergent understanding of the quantified-self archive, speculating on how the data should be presented to the public as a personal portrait of the self and, more fundamentally, how self-tracking technologies could be redesigned to better support meaning making in the future.

SELECT FINDINGS

A point of contention was whether an attempt should be made to 'locate' historical self-tracking data in the mind of the individual, using rich description to announce its creator's intentions. Overall, the idea of archiving self-tracking data alongside browser histories, social media posts, calendars, financial records, photographs, and interviews was to provide a space in which objective, subjective, emotive, and impressionistic data could be used in concert to shed light on an individual lived experience.

Presenting Data from the QS Archive

"I think summative data... So, it's funny as an individual to say I'm not so important, but I think that it's important that we sort of put ourselves in the real place that, you know, one day I'll be dead, and my legacy may be moderate and it's okay. I'm not Bruno Latour..." [P15]

Whether individualized or aggregated in form, self-tracking data was thought to have the most meaning when rendered to an imagined public in visual modes (pictures, graphs, and 3D renderings, etc.) and temporally situated.

In a nod to the materiality and ubiquity of smart phones today, participants mentioned the value in housing historical self-tracking data within and accessible through the original hardware and software, thus providing insights into how such technologies were amalgamated into daily living.

Participants also speculated about how current self-tracking apps could be redesigned to make the data more meaningful both now and in the future. Participants placed an emphasis on redesigning self-tracking apps to boost their potential for expressiveness both at the personal and collective level.

PUBLICATIONS

- Ciaran B. Trace and Yan Zhang, "The Quantified-Self Archive: Documenting Lives through Self-Tracking Data," *Journal of Documentation* 76 (1) (2019): 290-316.
- Ciaran B. Trace and Yan Zhang, "Configuring Personal Data for a Quantified-Self Archive," in *Extended Abstracts of the 2019 CHI Conference on Human Factors in Computing Systems* (CHI '19). ACM, New York, NY, USA.
- Ciaran B. Trace and Yan Zhang, "Towards a Typology of Self-Tracking Gaps," in *Extended Abstracts of the 2019 CHI Conference on Human Factors in Computing Systems* (CHI '19). ACM, New York, NY, USA.