

Beyond Project Time: Multiple Years of Living with a Slow Technology Research Product

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Abstract

We report on an ultra-long-term deployment of Olo Radio, a slow technology research product designed to support reflective, memory-oriented music listening. Following a single participant across multiple moves and life-stage transitions, we trace how Olo Radio was periodically foregrounded and backgrounded—cared for, reconfigured, and sometimes ignored—as it became woven into domestic life. Over the same period, researcher–participant relations shifted from a conventional study dynamic toward more reciprocal co-inquiry, culminating in the participant independently designing and building a successor device inspired by Olo Radio’s core design qualities. Drawing on this “sample of one,” we show how temporal depth makes visible rhythms, frictions, and forms of continuation that shorter deployments rarely capture. We also articulate methodological and ethical implications of research products that outlive their projects, including stewardship, attachment, and participant-led continuation beyond project time.

CCS Concepts

• **Human-centered computing** → Interaction design; Interaction design theory, concepts and paradigms.

Keywords

Research through Design, Research Products, Slow Technology, Field Deployment Study

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1 Introduction

The kinds of questions that HCI researchers are pursuing continue to expand. A growing portion of the community has moved beyond designing for efficient use to investigating complex matters of human–technology relations that are often messy, intimate, and contested. Many of the technologies that populate domestic and everyday environments—voice assistants, connected speakers, smart photo frames—do not simply get “used” and then discarded; they

settle in, recede into the background, and become part of how people remember, feel, and organize their lives. What roles could—or should—interactive technology play when we consider it as a long-term, evolving component of everyday life? How do choices around materials, form, and computation shape people’s relations to technological objects—not only at first encounter, but as both people and design artifacts age?

Design-oriented HCI and Research through Design (RtD) practice [24, 92] has responded to these questions, in part, through work on slow technology and research products. The *slow technology* design philosophy [33, 58] advocates for designing artifacts that *take time to understand*; *manifest change through time*; and, *invite open-ended reflection rather than efficient task completion*. Research products [6, 7, 9, 63] similarly emphasize long-term engagement, but do so by treating the design artifact not as a fragile prototype on a trajectory toward iteration, but as a robust, highly resolved object intended to persist in everyday life. Research products operate as vehicles to investigate how technologies are lived with (both in use and non-use), revisited, reinterpreted, and maintained as part of ongoing everyday routines, interactions, and histories.

However, even studies of research products and slow technologies tend to span months rather than years. Funding cycles, student timelines, publication pressures, and the practicalities of keeping bespoke systems running all conspire to bound fieldwork to what might be called “project time.” As a result, we know relatively little about what becomes visible when a design artifact persists far beyond a typical research timeline—and how such persistence reshapes not only the artifact’s place in everyday life, but also the relationship between researcher and participant. How should researchers approach field studies of artifacts that aim to be in use *some of the time for a long time*, both through direct interaction and while operating quietly in the background?

In this paper, we report on an ultra-long-term field deployment of a research product called Olo Radio with a single participant (P1) over multiple years. Olo Radio is a slow technology music player that uses a person’s evolving listening history archive to embody the lifetime of digital music they have experienced, supporting interpretive, exploratory, and memory-oriented listening. The cornerstone of Olo Radio’s interaction design is its three different interconnected temporal modalities—including a chronological *Life* mode and non-chronological *Day* and *Year* modes—that enable users to relationally re-encounter their listening history from different perspectives in time. The system was originally introduced and studied in an eight-month field deployment by Odom and colleagues with five participants [64]. When that study concluded, one participant (P1) requested to keep the device. This request enabled



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a subsequent, independent follow-on engagement between P1 and a researcher, which forms the basis of the distinct and original contribution reported here.

What followed was an extended, unplanned trajectory that spanned an additional 4.5 years of P1's life, during which they moved homes multiple times, transitioned from student to full-time professional, entered a long-term partnership and married, and re-organised their domestic environment more than once. Throughout, Olo Radio was moved, re-installed, occasionally ignored, and repeatedly re-encountered. Over the same period, researcher circumstances and institutional conditions shifted, affecting how contact was maintained and how the study itself was conceived. Ultimately (and much to our surprise), P1 not only continued to live with Olo Radio, but eventually designed and built their own successor device that extended—and reinterpreted—the underlying idea of maintaining a personal listening history.

We use this design research case to examine what becomes visible when a research product outlives the project that created it. How does a design artifact become woven into someone's life across multiple years, home moves, and life-stage transitions? How do researcher-participant relations change when contact stretches over half a decade and the participant becomes the primary knower of the artifact-in-life? What can a "sample of one" contribute when the goal is not generalization, but sustained insight into change over time? And what methodological, ethical, and infrastructural commitments follow when a design artifact's continuation—and eventual closure—must be negotiated beyond project time?

We use the term "ultra-long-term" not simply to denote an atypically long duration of this field deployment, but to signal a qualitative shift in what becomes analytically visible. At this timescale, the focus moves beyond adoption or sustained use toward phenomena such as re-domestication across life transitions, shifts in interpretive authority, and participant-led continuation—dynamics that typically remain inaccessible within project-bound timelines.

Our contribution is not a generalizable model of long-term adoption, nor a systematic, controlled evaluation of Olo Radio's long-term effects. Instead, we offer a rich, situated account of one extended entanglement between a person, a research product, and a researcher. We make three main contributions: First, we provide an empirical account of a multiyear deployment that traces how P1's relationship with Olo Radio was sustained—and periodically reconfigured—across multiple moves and life-stage transitions. Second, we critically reflect on evolving researcher-participant relations in ultra-long-term engagements, showing how temporal depth can shift interpretive authority and foster more reciprocal forms of inquiry. Third, we examine participant-led continuation and invention, describing how living with a research product over years culminated in a successor artifact authored and maintained by the participant. Together, these contributions open discussion about how HCI might better attend to the long temporal arcs of lived-with technologies, and what it means—for both method and ethics—to follow research products beyond project time.

2 Related Work

Related work falls into three areas: (1) long-term deployments in everyday life, (2) research products and slow technology, and

(3) relational and reflexive perspectives on researcher-participant relationships.

2.1 Long-Term Deployments in Everyday Life

A substantial body of HCI research has examined the processes through which interactive technologies become (or do not become) *domesticated* [74, 75], *appreciated* [28], or *unremarkable* [80] in everyday life, particularly in the home. This work shows how technologies often move from novelty into mundane routines, oscillating between foreground and background attention. Studies of domestic technology use and appropriation—including digital photo displays and home archives [41, 52, 56, 77, 78], smart home systems [5, 8, 36], and accounts of breakdown, workarounds, and repair [40, 47, 88]—demonstrate how devices are physically and socially placed within domestic ecologies and how they mediate memory, social relations, and household routines over time.

However, even in this literature, "long-term" often means several weeks to a year. Following calls for longer studies "in the wild" [6, 42, 72], deployments extending 6–12 months (e.g., see [42]) have yielded insights into appropriation, habit formation, and cycles of use and non-use, but remain constrained by project time—deadlines, budgets, and the ongoing care required to sustain bespoke systems [72]. This is for understandable reasons: long-term studies are time-consuming, must be sustained across shifting institutional and personal circumstances, and require ongoing technical upkeep that often exceeds what typical projects can support [6]. As a result, we know comparatively little about how a single design artifact remains in a person's life across multiple years, home moves, and life-stage transitions.

Notable exceptions show what can emerge when artifacts persist beyond their initial studies. *Indoor Weather Stations*, deployed across 20 households for around a year (and, in a few some cases, longer), illustrates how artifacts can elicit "lingering affection" and "sporadic engagement" over time [31]. The *Prayer Companion* [25], installed in a cloistered convent, remained in use for over five years in a convent community, traveling with participants through relocation and evolving practices. *Photostroller* [26] was left at the care home and used for years, before being loaned to another care home (currently, its whereabouts are unknown [68]). *My Naturewatch* demonstrates the distribution of RtD artifacts at scale, with thousands of DIY builds supported by an online community that continues beyond the project's funding horizon [7, 27]. Related work on technology-mediated intimacy further illustrates how such artifacts persist within ongoing relationships and everyday life. For example, the *Messaging Kettle* was deployed over many months in multiple households to support everyday, lightweight communication at a distance [1], while *Light Touch* documents an autoethnographic account of living with a simple ambient communication device that connected a mother and son over several years and considerable geographic distance [30]. Alongside these, long-term research with design artifacts such as *Tilting Bowl* [86]—a more-than-two-year co-speculation with philosophers living with a slowly tilting bowl—and *table-non-table* [37]—several years of deployments with different households with an occasionally moving paper table—has examined how particular "things" come to mediate ongoing reflection and how human-technology relations evolve

over time. Together, such accounts highlight both the value—and difficulty—of attending to artifacts’ lives after the study officially ends.

Across the studies reviewed here, duration is often treated as an extension of deployment rather than as an analytic resource in itself. While longer studies have revealed processes such as appropriation, habituation, and breakdown, they less frequently examine how temporal depth enables shifts in meaning, relational dynamics, or the reconfiguration of artifacts across life transitions. This suggests an opportunity to move beyond treating time as a metric of study length, toward understanding what different temporal scales make visible in human–technology relations.

Our work contributes to this emerging space by offering a multi-year account focused on a single research product and participant. In parallel with recent arguments for the value of “samples of one” in long-term design research (e.g., [23]), we pursue depth across time rather than breadth across many households. Unlike many first-person deployments, our case follows a non-researcher participant who chose to continue living with a research product far beyond the original study, allowing us to examine what becomes visible when the unit of analysis is a person–artifact relationship that outlives its originating project.

2.2 Research Products, Slow Technology, and Designing for Temporality

Research products emerged in HCI as an approach to support investigations into long-term, situated human–technology relations that conventional research prototypes struggle to address [7, 9, 63]. Rather than treating artifacts as unfinished prototypes on a path toward commercialization, research products are robust, materially resolved objects designed to be lived with over time and to carry forward conceptual questions in the messy contexts of everyday life. In this sense, research products align with slow technology’s emphasis on duration, reflection, and open-ended engagement, orienting design research toward what artifacts afford as they are revisited, reinterpreted, used, not used, and sometimes repaired across extended periods.

Slow technology projects such as Photobox and Olly exemplify this intersection, each studied in-home over fourteen months. Photobox prints photos unpredictably from a large digital archive, inviting anticipation and reflective re-visitation [57, 59]. Olly cultivates a slow, ambient relationship to personal music history by pacing interaction so meaning accrues gradually [61, 62]. These studies show how appreciation and meaning can shift over time in ways shorter deployments miss, including how frictions related to, for example, intelligibility or interpretation, can become productively scaffolded into longer-term practices of reflection and reminiscence. Subsequent work has expanded slow and temporality-oriented design beyond pacing alone, exploring cycles, rhythms, delays, and accumulation as resources for engaging with personal data and everyday traces over time (e.g., [10, 15, 38, 69, 84]). Yet, even here, most deployments remain bounded by extended project time and the practicalities of building, batch-producing, and maintaining bespoke artifacts—limitations underscored by the labor and infrastructure required for projects like Indoor Weather Stations [31].

Other projects explicitly imagine much longer horizons but rely on probes, interviews, or short-term deployments due to institutional, ethical, and technical constraints. Technology Heirlooms explores multi-generational digital legacies through three working design artifacts (*Digital Slide Viewer*, *Timecard*, and *BackUp Box*) used as probes in interviews rather than through years-long lived-with experiences [54, 60]. Fenestra similarly calls for long temporal engagement in memorial rituals and practices, but limits trials of this design artifact to a few weeks due to ethical sensitivity and the resource demands of sustaining such deployments [85]. Echoing recent work [6], these examples foreground how time, attachment, and withdrawal are not merely logistical challenges but methodological and ethical ones for long-term design research.

Taken together, prior work on research products and slow technology underscores both the promise and the difficulty of studying long-term human–technology relations. Our work extends this trajectory by offering an ultra-long-term account of a single slow technology research product, Olo Radio, as it remained in one participant’s life far beyond the original study—allowing us to examine what becomes visible when a design artifact not only aspires to longevity, but actually persists through life-stage transitions, domestic reorganizations, and shifting researcher–participant relations.

2.3 Relational and Reflexive Perspectives on Researcher–Participant Relationships

Alongside interest in long-term use and temporal design, HCI’s turn to relational and reflexive perspectives builds on decades of feminist scholarship in the social sciences and humanities. Feminist epistemology has emphasized situated knowledges and the partial, located nature of any account (e.g., [11, 34, 35, 48]), while work on ethics of care has foregrounded interdependence, responsibility, and the moral significance of everyday relations (e.g., [32, 83]). Feminist and critical qualitative methods further stress reflexivity, power structures, and the researcher’s embodied presence in the field [19, 43]. Drawing on these traditions, feminist HCI and related approaches argue that values such as pluralism, participation, advocacy, and embodiment should shape not only RtD artifacts but also methods and evaluation (e.g., [2, 3, 73]), and that researchers’ positions and institutional attachments shape what kinds of collaborations and accounts are possible (e.g., [20, 22, 81]). Building on this, Toombs et al. extend a feminist ethics of care to analyze researcher–participant relationships across long-term ethnographic and RtD engagements, showing how care is reciprocally enacted, rather than flowing in a single direction from researcher to “subject” [81]. Together, this work positions relational ethics and ongoing reflexivity as central to how knowledge is co-produced in HCI.

In parallel, scholars have examined the affective and relational labor involved in RtD and fieldwork: building trust, negotiating roles, managing expectations, and handling the emotional weight of participants’ stories and circumstances over time (e.g., [50, 51]). Participatory and community-based design projects, in particular, have highlighted how collaboration often requires repeated visits, slow relationship-building, and ongoing attention to issues such as reciprocity, care, and responsible closure (e.g., [21, 44, 82, 89–91]). Across longer-term engagements, researchers and participants can

come to occupy multiple roles for one another—friend, validator, caregiver, and “vulnerable other”—with these reciprocal caring relationships shaping what is shared, what remains unsaid, and how experiences are narrated [81]. While this body of work emphasizes the relational and ethical dimensions of research, it often assumes engagements that remain bounded within project timelines. Less attention has been paid to how these relationships evolve when they extend across multiple years and life-stage transitions—where contact becomes intermittent, roles shift over time, and the artifact itself may continue to mediate the relationship beyond the formal study period. First-person and autobiographical design also foreground the entanglement of personal and professional roles, treating designers and their close relations as participants and making the researcher’s life and attachments part of the inquiry itself (e.g., [13, 23, 45, 53]). Taken together, these perspectives emphasize that HCI research unfolds through ongoing relationships that extend over time, not only discrete encounters.

Recent RtD work has explicitly taken up how we narrate temporality and process in these relational settings. Oogjes and Desjardins [65], for example, propose a temporal vocabulary of “design events” (moments, encounters, transitions, pauses, rhythms, other-times, temporal dissonances) to foreground the interwoven temporalities, hidden labor, and material agencies that shape RtD projects. Related accounts similarly argue for narratives that attend to the surprising, messy, and often non-chronological events through which knowledge is produced over time (e.g., [6, 14, 39, 79]).

However, much of this work still assumes a relatively bounded relationship: a project begins, unfolds, and ends within a defined window, with clear points at which data collection stops and the artifact is withdrawn or left behind. Less attention has been paid to cases where the relationship itself stretches over many years, across significant life changes for both parties, and where a research artifact continues to mediate contact long after an initial study has formally concluded. At that timescale, questions of care, reciprocity, and closure are not only ethical backdrops but methodological concerns: relational commitments shape the rhythms of contact, what can be sustained, and what becomes interpretable over time [21, 81, 89]. These concerns also become intertwined with the temporal fate of the RtD artifact itself—who maintains it, who decides when it should be retired, and how those decisions are negotiated once the artifact has become meaningful in someone’s everyday life.

Our case explores these relational questions in the context of a single, long-term deployment. Over multiple years, the relationship between a researcher (FA) and participant (P1) shifted from a conventional “study” dynamic toward a long-lived, artifact-mediated relationship in which interpretive roles, obligations, and possibilities for continuation evolved over time. This allows us to extend prior relational and reflexive work by examining how temporal depth can reorganize researcher–participant relations, and how responsibilities for continuation and closure become part of the method when a research product persists beyond project time.

3 Study Context and Approach

3.1 Background: Olo Radio Research Product and Field Study

Olo Radio works by linking to a user’s Last.FM account. Last.FM [93] is a free web-based application that runs across a user’s personal computer, smartphone, and peripherals to generate precise records of each song they have listened to (e.g., timestamp, artist, track, album, and source application). In existence since 2002, Last.FM offers access to its users’ potentially extensive listening histories. Olo Radio uses the temporal metadata associated with each Last.FM instance (“scrobble”) to enable the user to interact with music from their past through both chronological (*Life*) and non-chronological timeframe modes (*Day*, *Year*). Different modes can be selected and toggled by the knob next to the motorized linear slider. The motorized slider—whose form alludes to a timeline—is used to navigate these listening instances, with its position corresponding to a specific ‘point in time’ relative to the selected mode (see Figure 1).

The three modes offer distinct yet interconnected temporal perspectives: *Life* organizes listening history from earliest to most recent, *Day* surfaces patterns tied to time-of-day, and *Year* foregrounds seasonal or calendrical rhythms. Switching between modes reorganizes the surrounding sequence of listening instances while maintaining the currently playing song, enabling users to move across different temporal framings of the same listening history.

When Olo Radio is turned on, it begins playing the song queried from the slider’s current position. If left untouched, Olo Radio will continuously play music, slowly moving forward in the timeframe mode. If the slider is moved, the current song will fade out and the song at the new location ‘in time’ will fade in. If the timeframe mode is changed while a song is playing, it will continue to play as the slider moves to the position in time where that instance is located in the new mode. In effect, the playing song remains unchanged, but the sequence of all listening instances surrounding it is reorganized based on the newly selected mode.

Importantly, Olo Radio’s interface is intentionally minimal. It offers no explicit information about the specific listening instance of a song or the structure of the overall archive. As one’s archive grows, the granularity of the slider’s timeline correspondingly decreases. Inspired by slow technology’s conceptual emphasis on designing systems that *require time to understand* [33, 58], this minimal feedback is designed to cultivate a self-developed sensibility for interpreting and navigating one’s listening history over time (for more design details, see Odom et al. [55, 64]).¹

Previously Odom and colleagues deployed and studied five Olo Radio research products with five respective participants for 8 months [64], from May 2019 – February 2020. Our study collected descriptive accounts of participants’ lived experiences with Olo Radio through interviews during home visits across this period, focusing on documenting emerging practices and how the device settled into everyday routines. We reported that Olo Radio became highly integrated into participants’ daily lives, prompting memory-oriented listening, anticipation, and new ways of experiencing

¹Videos and photos documenting Olo Radio’s functionality, interaction design, and conceptual goals are archived on the Homeware Lab website: <https://www.homewarelab.com/projects/olo-radio>

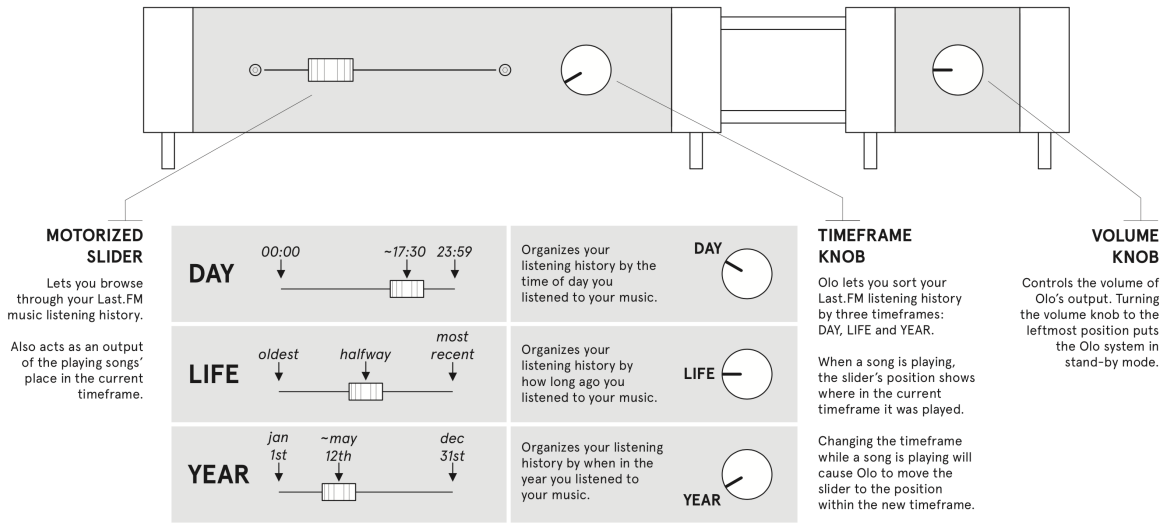


Figure 1: Explanation of the features, timeframe modes, and interaction design of Olo Radio.

time, while also foregrounding gaps and “black spots” in listening histories and the ongoing work required to sustain a long-term personal data archive.

In this paper, we build on but remain analytically distinct from this earlier work. Rather than revisiting the original five-participant deployment, we focus on one participant (**P1**) who continued living with their Olo Radio for several years beyond the original study period. Our contribution is an analysis of what became visible in this extended “afterlife,” beyond the time horizon of the original deployment.

3.2 Beyond Project Time: Long-Term Engagement & Evolving Corpus

This paper extends the prior field study summarized above into what we term “beyond project time.” We focus on what unfolded between the author of this paper (**FA**) and a participant (**P1**) who lived with Olo Radio for 4.5 additional years after Odom et al.’s initial eight-month deployment. This situation emerged when **P1** expressed a desire to continue living with their Olo Radio at the end of that prior study. Given that the device had been created to hold up over time, **FA** took on this work as it moved into a phase beyond the initially planned project. **FA** initially planned to conduct bi-monthly interviews with **P1** to explore their ongoing experiences of living with Olo Radio.

In practice, this “beyond project time” phase unfolded unevenly. Over the next 4.5 years, **FA** and **P1** stayed in contact through a combination of planned interviews, opportunistic conversations, and intermittent email and messaging exchanges, interspersed with periods of little or no contact. These ebbs and flows mirrored significant life events on both sides. At the outset of this extended study (February 2020), **FA** was a late-30s white male in a committed domestic partnership, working as a university researcher and instructor. **P1** was a late-20s white male, single, living in a shared house with roommates, and beginning to pursue post-secondary education while working part-time in a local restaurant. **P1** was

an avid music listener, having maintained a Last.FM account to archive their listening history data since 2006. In February 2020, their Last.FM archive contained 197,375 total instances of songs listened to; by the conclusion of this study at the end of December 2024 it had grown to nearly 300,000 (298,740 to be precise).

Over the ensuing 4.5 years, **P1** moved homes multiple times, entered and formalized a long-term partnership (eventually becoming married), completed his post-secondary degree, and experienced professional transitions as he began full-time work as a software developer. While **P1** did not initially engage in woodworking and hardware prototyping at the beginning of the study, their later professional trajectory as a software developer and growing interest in personal data practices likely shaped their capacity to design and build a successor device (which we will detail). **FA** moved homes, married, became a parent, and navigated shifting institutional responsibilities and funding constraints. Across this period, **FA** maintained an evolving corpus that included: audio recordings and notes from follow-up interviews and check-ins with **P1**, fieldnotes documenting Olo Radio and the shifting domestic configurations it inhabited, email and messaging exchanges concerning technical issues, moves, and life updates, and personal research journal entries in which **FA** periodically reflected on the study’s trajectory. We include these brief positionality details to foreground how shifting life circumstances and social locations shaped both the practical course of the study and the kinds of relations that could form over time.

By late 2024, this corpus spanned 4.5 years and multiple domestic and life-stage transitions. Rather than treating it as a continuous time-series suitable for fine-grained longitudinal analysis, we approached it retrospectively, attending to how Olo Radio and the relationship between **FA** and **P1** had shifted over time and how these shifts were entangled with the rhythms and disruptions of their lives. As the engagement extended beyond the original study period, questions of consent, data stewardship, and institutional responsibility required ongoing negotiation. Rather than a single

consent event, participation became an evolving agreement sustained through periodic check-ins and mutual understanding. Data collection and communication practices were adapted over time to reflect changing circumstances, including shifts in contact frequency and the informal nature of some exchanges. In this sense, the study did not proceed as a fixed protocol, but as an evolving relational arrangement shaped by both participants' changing lives. In the next subsection, we describe how this dispersed corpus was distilled into a set of annual vignettes that structure our findings.

3.3 Annual Vignettes

In the Findings, we present a series of annual vignettes that trace how **P1's** relationship with Olo Radio, and with **FA**, changed over 4.5 years. Building on recent HCI research that uses vignettes to convey situated experience and analysis (e.g., [12, 13, 16, 18, 29]), we treat these as analytic constructions rather than raw moments. Each vignette condenses a year of dispersed interactions, events, and reflections into a coherent narrative unit, allowing us to make longitudinal change legible without presenting the corpus as a continuous time-series. This approach aligns with qualitative and autoethnographic traditions that treat scenes as crafted accounts rather than literal slices of data (e.g., [17, 71]), and with composite vignette approaches that weave multiple moments together to surface broader patterns while supporting participant anonymity (e.g., [49, 87]).

In the work presented here, vignettes are narrative accounts of experiences and shifts that occurred each year, written from **FA's** perspective. The construction of each vignette involved selecting and synthesizing multiple forms of material, including interview excerpts, fieldnotes, correspondence, and retrospective reflections. Selection was guided by identifying moments where relations between **P1**, Olo Radio, and **FA** appeared to shift in meaningful ways. Rather than indexing single interview excerpts or isolated interactions, each vignette brings together several encounters and traces from that year into a composite scene that highlights how Olo Radio, **P1's** domestic arrangements, and the relationship between **P1** and **FA** were co-evolving. While grounded in documented interactions, the vignettes are interpretive reconstructions rather than verbatim accounts. They aim to preserve experiential and relational dynamics over time rather than provide exhaustive chronological detail.

Analytically, we began by constructing a high-level timeline of the 4.5-year engagement, mapping **P1's** domestic and life-stage transitions alongside major changes in Olo Radio's placement, use, and maintenance, as well as relevant changes in **FA's** circumstances. We then identified salient events (inspired by “design events” [66])—including moves, technical breakdowns, re-installations, and conversations about keeping or returning Olo Radio—that appeared to reconfigure how **P1** and **FA** related to the device and to one another. For each year, **FA** drafted candidate vignettes centered on these events, then iteratively revised them with **P1** through multiple rounds of discussion and writing to clarify what they revealed about long-term domestication, care, and continuation. This vignette development took place over approximately six months during the final phase of the study, initiated when **P1's** impending move made ongoing maintenance unviable.

The final set of six vignettes does not offer an exhaustive chronicle of everything that happened with Olo Radio or in **P1's** life. Rather, they highlight episodes where temporal, relational, and material changes became particularly visible: moments when Olo Radio was moved or re-domesticated, faded into the background or resurged in importance, or became a reference point for reflecting on personal history and future data practices. In line with composite and analytic vignette traditions, we acknowledge that these accounts are necessarily partial and selective; they foreground some relations while leaving others less visible. We invite readers to keep this partiality in mind and to read the vignettes as one way of making sense of a long, uneven trajectory, rather than as a complete or definitive account.

4 Findings

Next, we present six annual vignettes that trace how **P1's** relationship with Olo Radio—and with **FA**—unfolded over 4.5 years. The vignettes begin in February 2020, after Odom et al.'s initial study concluded, when **FA** began an analytically distinct phase of engagement beyond project time. At that point, Olo Radio had already settled into **P1's** home and everyday practices. From there, they follow the device and the relationship through multiple moves, life-stage transitions, and eventual participant-led continuation. Rather than offering a complete chronology, they foreground episodes in which Olo Radio was re-domesticated, temporarily sidelined, or refigured as a prompt for reflection, and where questions of maintenance, attachment, and responsibility surfaced.

4.1 Year 1: February 2020 – April 2020 | At home in the living room

When **FA** and **P1** met in early February 2020, Olo Radio was described as “part of the living room's personality.” It was neither tucked away nor treated as a precious object; it was integrated into the everyday AV setup **P1** shared with their roommates (see Figure 2). On quiet evenings, **P1** would sometimes “study” the slider before turning the device on—leaning in, checking which mode it was in, where in the *Life* timeline the slider rested, and taking a moment to speculate what sort of musical era of their past they were about to be dropped into. They favored the *Life* and *Day* modes, often letting Olo run for an hour or more as it wandered through partially known or forgotten corners of their listening archive. **P1** talked about these sessions as a way of “seeing” who they were in different years, paying attention to which genres clustered together and which songs no longer represented who they are now.

Some of these sessions became small social events. One weekend afternoon, two roommates and a friend were hanging out in the living room, talking about the music that was the backdrop of their early experiences when moving to the city. **P1** switched Olo to *Life* mode and nudged the slider back to roughly around the year he arrived. A sequence of indie rock and pop-punk tracks flowed from the speakers. As a recognizable song came on, one roommate suddenly remembered a late-night walk they and **P1** had taken shortly after moving in together. The conversation drifted between specific songs, shared memories, and, eventually, shared reflections on “cringe phases” in one's musical taste “back then” and earlier



Figure 2: Left: Olo Radio at P1’s original shared home living location (late-February 2020). Right: Olo Radio at P1’s apartment living room (late-December 2024).

in life. In these moments, Olo Radio provided a social resource for collective reminiscing rather than a private, introspective tool.

Other moments were more awkward. During a small party, P1 left Olo running in *Life* mode in the background as people arrived. At first, the sequence of indie and electronic tracks worked fine, but after a while selections from what seemed to be an old, emotionally charged playlist surfaced—loud, angsty songs from a period P1 associated with a difficult breakup. A guest made a joking comment about the “teenage young love” vibe of the music. P1 laughed it off and quickly switched the living room over to a more neutral, contemporary playlist of music via their phone, later remarking “Olo is too honest for parties.” This experience did not appear to diminish P1’s attachment to Olo Radio, but it sharpened their sense that Olo was grounded in a deeply personal data history that did not always fit casual social situations in a shared space. In retrospect, this friction became an event—a moment that clarified how Olo’s personal honesty and capacity for unwanted social disclosure could sit uneasily in shared social settings, foreshadowing later spatial reconfigurations of where it belonged.

For FA, these months involved discussions on the living room couch while Olo played softly in the background, notes about how its physical placement and presence seemed stable and “domesticated.” Overall, Olo Radio generally appeared to have “settled in” as part of the shared living room, quietly mediating both solitary reflection and small moments of storytelling with others. By mid-March, however, the onset of the COVID-19 pandemic abruptly interrupted these routines. In-person visits were suspended, classes abruptly moved online, the house shifted into a protective bubble, and contact moved to intermittent virtual check-ins. The living room remained Olo Radio’s home, but the social worlds around it—and FA’s ability to witness those worlds directly—changed.

4.2 Year 2: May 2020 – April 2021 | Turning inward: an evolving perspective on Olo and their personal archive

By early summer 2020, the shared house felt less like a lively social hub and more like a closed ecosystem. The pandemic reshaped everyday rhythms: few to no visitors, far less spontaneous hangouts, and a heightened sensitivity to what belonged to whom—spaces, routines, and personal atmospheres. Olo Radio remained physically present in the living room for a time, but P1’s relation to it began to shift. What had previously been a device that could occasionally be a resource for collective reminiscing now felt like a portal into something more private: not just music, but a record of tastes, moods, and life periods that could be accidentally exposed.

Over a series of remote check-ins, P1 described noticing patterns that were difficult to perceive through conventional music platforms. Olo Radio’s temporally interconnected sequencing at times could make their listening history feel less like a list or ledger of use, and more like a biography with recurring motifs—certain genres or songs clustering around specific years, particular artists or albums tethered to relationships, jobs, or phases of identity. P1 spoke about encountering forgotten tracks that returned with emotional resonance, and about recognizing “turning points” where their archive documented a shift in who they were trying to be. Yet, as P1’s relation to Olo deepened, so did the sense of vulnerability it carried. P1 began to describe the device not as a neutral music system but as an expression of self—one that could be overheard, commented on, or misread by roommates in ways that could be uncomfortable. In retrospect, this growing sensitivity around audibility and interpretation became one of the year’s key events—a moment where the domestic placement of the artifact began to reorganize what kinds of relations felt possible.

This tension culminated in a practical decision: P1 moved Olo Radio out of the living room and into their bedroom. The relocation was not framed as hiding the device away, but as re-situating it

in a space where its intimacy made sense. In the bedroom, Olo was placed among other personal artifacts—small mementos, photographs, and objects that were not typically “for the house” but specifically for **P1**. The move also changed the kinds of listening that became possible. Rather than serving as background for shared space, Olo became something **P1** turned to deliberately: a device to spend time with, sometimes late at night, sometimes during quiet afternoons when the house was otherwise still. In this setting, **P1** described feeling freer to explore their music listening experiences with Olo Radio without managing how that experience might look or sound to others. The shift also subtly recast Olo from a “public” domestic device into something closer to a personal object—kept nearby, arranged, and used on **P1**’s own terms.

For **FA**, this year marked a parallel shift: the study’s cadence became harder to sustain, and the relationship with **P1** became more uneven. In-person visits were impossible. Remote interviews happened when both lives allowed—sometimes after gaps of several months. **P1**’s updates arrived through a mix of scheduled calls and occasional messages: a note about where Olo was now set up, a brief observation about a surprising resurfaced era of music, a question about whether a malfunction was “normal.” **FA**’s own capacity to maintain consistent contact fluctuated under pandemic conditions and personal disruptions, and the labor of “keeping the study going” increasingly blended with the labor of staying connected as two people living through a period of shared uncertainty. These uneven rhythms of contact became part of the situation itself, shaping what could be witnessed, documented, and responded to as the project stretched on. Within this same period, **FA** also underwent their own compressed life transition: a COVID-era elopement with no guests, followed by an immediate return to remote university work—teaching, coordinating projects, and so on as the pandemic continued.

By the end of this year, Olo Radio had effectively become a more intimate object—less socially legible as “a quirky thing in the living room,” and more privately legible as a device that carried and revealed a personal data history. **P1**’s decision to move Olo Radio to their bedroom clarified its role in their life – it became increasingly personally meaningful, in part, because it was not always appropriate to share.

4.3 Year 3: May 2021 – April 2022 | Moving home & re-domesticating:

By late spring 2021, **P1**’s bedroom was Olo Radio’s refuge. It sat among mementos and personal clutter, used in bursts—sometimes for an evening of wandering through old listening years, sometimes not for weeks. Remote check-ins revealed that Olo Radio was “still there” in **P1**’s life, but the rhythm of their engagement had loosened. The year was marked by transitions that had nothing to do with Olo and everything to do with life reorganizing around it: relationships deepening, future plans consolidating, and the slow, uneven emergence from pandemic routines.

The first major shift arrived with a move. After years in a shared house, **P1** relocated into a small apartment with their partner (whom they met the year before). The move presented a quandary: where would Olo belong now? In the shared house, the device could be “too honest” for social life; in the bedroom, it was safely

intimate. But the new apartment and social organization of this home collapsed those boundaries. During an early call, **P1** spoke about having only “sparingly” introduced their partner to Olo while dating—often framing it as a quirky research device rather than as a portal into an archive that could reveal “cringe” music phases, old attachments, or forgotten past experiences. The decision to bring it into the new home carried risk: to place it visibly was, in effect, to make a portion of their personal history available to another person; while this was a trusted partner, the potential effects felt unpredictable.

In the month after the move, contact went quiet. When **FA** eventually reached **P1** again, the update came casually: Olo had been reinstalled—by **P1** alone—in the living room. **P1** described how they had unpacked it like any other possession, set it near the main audio setup, tested the connections, and found a spot where it “made sense.” The living room arrangement mattered. The placement made Olo less like a private diary and more like a domestic fixture that could be encountered in passing. A key moment occurred when **P1** turned it on in the new space with their partner present. **P1** began in Life mode, letting the device drift through a stretch of listening history that predated the relationship. **P1**’s partner asked questions that reframed the listening as a kind of biography. Where was this music from? Why did he like it? And so on... The conversation moved between songs and stories, and the archive began to operate as a social resource for casually learning about each other.

Over subsequent months, **P1** reported that intermittent, yet ongoing listening practices resumed. Here, Olo became part of couple life: sometimes an ambient presence while they worked at home, sometimes a prompt for conversation, and occasionally a private experience **P1** took when alone. The device’s temporal structure continued to relationally expand. One recurring thread in these conversations was the way certain musical tastes seemed to “reappear” with new clarity. **P1** noted how an artist that had once been only lightly present in earlier years (King Gizzard and the Lizard Wizard) now formed a more visible arc across the archive—surfacing again and again as if their past, lesser recognized music listening choices subtly foreshadowed a present taste. These re-encounters carried a different tone than the earlier “turning inward” of Year 2: they were less about guarding vulnerability and more about noticing continuity—how the archive both recorded change and kept returning to recognizable themes in **P1**’s life story.

For **FA**, this year carried a distinct tension of its own. The move represented a methodological threshold: Olo Radio was being unplugged, boxed up, transported, and re-domesticated without a researcher physically present and intervening. In prior work, re-locations and re-installations are uncommon and rarely visible—not necessarily because they never happened, but because project timelines, constraints, and the fragility of participation tended to keep studies within somewhat stable domestic conditions. Here, in contrast, **P1**’s independent re-installation became an event worth attending to. It signaled a shift in responsibility—**P1** was not merely “using” Olo but actively sustaining it as something that could live on. In that sense, the move made visible a central aspiration of slow technology and research products: designing computational things that can remain part of everyday life over long periods, and whose

meanings and relations can develop through life-stage transitions rather than remaining bound to a single study context.

At the same time, **FA**'s own capacity to sustain a regular research cadence wavered under accumulating pressures: a move to a different home, a major knee injury, and the uncertain logistics of emerging from the pandemic while preparing for the arrival of a new child and parenthood. Yet across this unevenness, contact became more consistent again—bi-monthly calls returning as a shared pattern. By the end of Year 3, Olo was no longer only an intimate object of self-reflection in a bedroom; it had become part of the material and relational work of making a home—present in a shared space, sustaining alternative forms of listening, and subtly reshaping what kinds of pasts might be shared in the present.

4.4 Year 4: May 2022 – April 2023 | Re-Domesticating again

By early summer 2022, the apartment **P1** shared with their partner felt less provisional than before. The contours of domestic life had taken shape: shared routines, shared storage, shared surfaces. Olo Radio sat in the living room as a fixture—occasionally a conversational prompt, sometimes just another quiet object in the room. But as the year unfolded, major changes arrived as overlapping timelines—wedding plans, graduation deadlines, and the first steps into professional life.

The next key event came with another move. After graduating and beginning full-time work as a software developer, **P1** and their partner relocated to a high-rise apartment. The new space carried a different aesthetic: fewer inherited items, more deliberate furnishings, and an impulse to make the home feel *finished*. **P1** described the move less as a disruption and more as an opportunity to reconfigure. In that reconfiguration, Olo's place was not obvious. Yet, **P1** reported that Olo had made the move and been reinstalled again—by **P1** alone—this time as part of the new living room. It sat centered beneath a wall-mounted TV, aligned with the main speaker and flanked by domestic artifacts that signaled curation rather than clutter: stacked books, a large ceramic vase, a small plant, a folded textile draped nearby.

After the move, **P1** described returning to a rhythm of use—often ambient or improvised, occasionally deliberate—suggesting that Olo had re-settled into everyday life in the new space. In one discussion, **P1** reflected that Olo now felt more like a companion artifact—something that had “been there” through multiple changes. The archive made that endurance audible: shifts in taste, sudden intensifications, and the slow accumulation of new listening traces now sitting beside teenage-era songs as part of a single, expanding record.

What stood out this year was not only that Olo persisted, but that its role subtly broadened. Earlier, it had alternated between social resource and private vulnerability. Now it also acted as a marker of continuity—an object that had followed **P1** across moves and reorganizations of self, still able to produce moments of recognition without demanding constant attention. On some evenings, **P1** described being surprised by how quickly a song could return them to a specific memory or a emotional texture. The archive did not simply document who they had been; it offered recurring

evidence that the past remained available, sometimes unexpectedly compatible with who they were becoming.

For **FA**, Year 4 moved to a different rhythm. With a new child at home and an eight-month period of parental leave devoted to full-time caregiving, **FA**'s capacity to sustain regular contact narrowed. Communication with **P1** condensed into three exchanges across the year. In this period, the long-term “study” became less something **FA** could continually witness and more something **FA** periodically re-entered. Across this period, Olo kept working without interruption through another relocation, new network conditions, and the churn of early professional life. This continuity enabled Olo to remain not only a domestic object that survived logistics, but an artifact that could keep accruing meaning without requiring constant repair or researcher intervention. By the end of Year 4, Olo was neither a discarded relic nor a static keepsake. It had become a part of **P1**'s home—sometimes background infrastructure, sometimes a device that pulled the past into the room—quietly demonstrating what it can look like when a research product persists across life-stage transitions and continues to matter.

4.5 Year 5: May 2023 – April 2024 | An emergent practice: listening, noticing, & desiring a record

Across conversations this year, **P1** increasingly spoke about their listening history less as “data” and more as a durable record—something that had slowly thickened over time and now had a kind of texture. Olo's temporal modes made that texture perceptible: the way clusters of artists seemed to gather around certain periods, the way particular years felt dense or sparse, the way older phases could reappear without warning and still feel strangely close. **P1** contrasted this with other personal data that felt fragile or displaced—files spread across generations of laptops, accounts that came and went, traces that were technically stored somewhere but no longer felt accessible or coherent. Olo Radio, by comparison, offered a sense of continuity: an archive that did not merely sit in the past, but kept accumulating alongside them.

A small shift in the room extended this sensibility. Over the year, **P1**'s turntable became a more regular presence—near enough to Olo that the two devices formed a loose constellation for listening. Records brought different rhythms and rituals: selecting an album, flipping a side, noticing the physicality of attention. And gradually, **P1** began to feel an absence. Vinyl listening was meaningful and situated—an evening record, a weekend discovery, an album revisited at a particular moment—but it left no comparable trace that could be returned to later. If Olo made one kind of history audible, the turntable highlighted another kind of history that was passing without a record.

This realization did not arrive as a single epiphany so much as a recurring envisaged need that gained clarity over time. **P1** began describing a desire to *keep* vinyl listening—not to quantify it, but to let it accumulate into something they could revisit and interpret later. When **FA** asked why that mattered, **P1** returned to Olo: over years of living with it, the device had become “more than a music player.” It had become a way of encountering the persistence of personal history—how tastes change, how patterns

endure, how a record of everyday listening can outlast the devices and platforms that produced it. In that light, the urge to capture vinyl listening was less about “tracking” and more about continuity: wanting another listening practice to become part of a future past.

For **FA**, Year 5 marked a quieter but consequential shift in the relationship. Earlier, conversations had often been oriented around documenting use, checking in on domestication, or responding to the practicalities of keeping a bespoke device running. Now, the nature of **FA** and **P1**'s relation moved toward shared sensemaking. At this point, **P1** had an established, first-hand understanding of Olo in their own life—how it “fit,” what it revealed, when it felt too exposed, when it receded into the background, and why it continued to matter. That long-term familiarity changed the balance of expertise in the conversations: **P1** was no longer primarily “reporting experiences,” but increasingly articulating interpretations, hunches, and emergent questions that **FA** found themselves following. Over time, **FA** and **P1** also found themselves repeatedly reflecting on shared music tastes in ways that were incidental to the study, but hard to keep separate from it: albums that resurfaced in Olo's sequences, artists newly discovered, memories triggered by particular eras, and the ordinary social work of explaining taste to another person. These exchanges were not part of a formal protocol, yet they accumulated into a different kind of familiarity.

Seen across years, that familiarity altered what kinds of conversations became possible. Even with infrequent contact, **FA** and **P1** had both moved through life-stage changes that inevitably surfaced in fragments—moves, work transitions, shifting responsibilities, brief updates that provided context for how Olo's role was changing. Those fragments were not collected as “life history data,” but they nonetheless became part of the interpretive ground on which Olo's changing meanings could be understood. The researcher-participant boundary did not disappear, but it became less sharply legible in practice: discussions increasingly resembled co-exploration, where **P1**'s situated expertise with their Olo Radio and archive carried analytic weight, and **FA**'s attention shifted from “capturing experiences” to staying attuned to what those experiences *meant* within the evolving conditions of **P1**'s life. In this sense, the long-lived artifact also helped cultivate a long-lived analytic relationship: one sustained by intermittent contact, mutual recognition, and a shared capacity to notice what was changing. By the end of Year 5, Olo Radio was not only a long-lived artifact in the evolving domestic sphere of **P1**; it had helped cultivate a long-lived interpretive relationship—one that made room for deeper reflection on what it means to keep a personal digital history, and for new design desires to emerge from that sustained lived-with experience.

4.6 Year 6: April 2024 – December 2024 | Making one's own digital history

In earlier years, change arrived as visible disruptions for **P1**—moves, re-installations, and reconfigurations of domestic space. In Year 6, the disruption was prospective rather than immediate: an impending move abroad that raised questions about whether Olo could remain workable at all.

Midway through the year, **P1** contacted **FA** with news they were planning to move overseas for an extended period. Olo Radio

could, in principle, travel with them—**P1** made clear they still felt attached to it and appreciated what it had enabled. But, feasibility was a concern. **P1** named a cluster of practical uncertainties that were difficult to resolve in advance: time zone distance that could make troubleshooting slow; licensing and geopolitical restrictions that might interrupt Olo Radio's capacity to stream music; and the possibility of connectivity constraints—firewalls, network policies, or platform changes—potentially rendering the device unusable.

Rather than framing this as a simple decision to “keep it” or “return it”, **P1** spoke with ambivalence. Keeping Olo could mean carrying the responsibility for a bespoke, research-built artifact into a completely different context. Returning it, on the other hand, felt like giving up a companion object that had followed them through multiple life-stage transitions. Over several exchanges, a third option began to take shape: **P1** asked whether it might be better for Olo to return to **FA**—not as abandonment, but as a kind of re-homing. If the device stayed with **FA**, it could be maintained, kept operable, and potentially used by others in the future.

When **FA** and **P1** met for a final interview, the conversation carried the weight of conclusion, yet it also arrived with an unexpected turn. As they talked through the logistics of the move and the plan to return Olo, **P1** referenced a small object they had been working on for months: a handcrafted wooden box with a simple display set into its face. **P1** explained that it was designed for one purpose—to create an ongoing archive of their vinyl listening history. Inside the enclosure, they had housed a Raspberry Pi that powered the display. Alongside it, they had built a lightweight mobile app that let them manually log each record they listened to; each entry was timestamped and, when available, paired with album art that appeared on the display. The box sat near their turntable among other everyday living room objects, and had already been in everyday use for several weeks.

The so-called “vinyl scrobber” was not presented as a replacement for Olo, but as a continuation of the desire that had developed the year before (see Figure 3). Living with Olo had made one thing increasingly clear to **P1**: what mattered was not simply access to music, but the ability for listening to leave a trace—to become a re-visitable record. The vinyl scrobber translated that conceptual aim into vinyl listening, giving those sessions a way to accumulate into something that could later be revisited and interpreted. In this sense, the vinyl scrobber, embodied in the form of a wooden box, was less a tracking device than a small, situated archive: a way of making listening legible over time, and of preserving the conditions for later noticing, creative exploration, and reflection.

For **FA**, this outcome reframed the end of the engagement. When **FA** and **P1** first began their study “beyond project time,” **P1** was living with roommates, working part-time in a restaurant, and contemplating post-secondary education. By the end of Year 6, **P1** was preparing to relocate internationally as a professional software developer—and was presenting a self-made, research-adjacent artifact shaped by years of living with Olo's slow, reflective design qualities. In that moment, the study's trajectory became legible in a new way: not only as sustained relations with a device, but as the gradual emergence of a capacity to *author* one's own record-keeping system—designed, built, and maintained outside of the original RtD artifact.



Figure 3: The ‘vinyl scrobber’ handcrafted by P1 composed of mahogany wood, a Raspberry Pi and small display paired with a mobile application for logging vinyl listening histories manually.

Year 6 clarified that the durability of long-term research products is never only a matter of robust hardware—it is also contingent on platform policies, network infrastructures, and the practicalities of care across distance. P1’s decision to return Olo was thus less an endpoint than a stewardship move: an effort to keep the artifact operable and meaningful beyond their own ability to maintain it. At the same time, the vinyl scrobber suggested a different kind of continuation—where long-term living-with did not merely sustain a device, but was translated into a new artifact with a related purpose and related design qualities. Taken together, the return of Olo Radio and the emergence of the vinyl scrobber reframed continuation as both stewardship and translation.

5 Discussion and Implications

Across the six vignettes, Olo Radio’s “life” exceeds what is typically captured in field deployment studies of RtD artifacts: it persists beyond initial appropriation, travels across relocations and reconfigurations, and gradually reshapes how P1 values, interprets, and relates to their listening-history archive. Rather than extending a typical deployment window, this account foregrounds what becomes visible when a research product persists beyond project time. Our aim is to show how ultra-long-term engagement with a research product can surface qualitatively different dynamics—of re-domestication, relational co-inquiry, and continuation—than those typically visible within project time. Next, we reflect on what becomes visible at this timescale—beyond project time—and outline implications and opportunities our account suggests for future HCI and design research.

5.1 Beyond long-term “use”: attending to re-domestication across life transitions

Most HCI deployments of RtD artifacts still resolve within a horizon where novelty fades and routines stabilize, but before an artifact has to endure multiple role changes in a person’s life, such as in

P1’s case: roommate to partner, student to professional, provisional living to curated home, local stability to international relocation. Our near half-decade account suggests that this longer arc is not simply an extension of familiar longitudinal dynamics, but a qualitatively different analytic condition. It surfaces phenomena that are difficult to observe within project time: prolonged stretches where an artifact recedes into the background and later reappears as a point of attention, and moments where personal data shifts from ‘listening history’ into a tangible record that can be revisited, questioned, and reinterpreted.

A key contribution of ultra-long-term RtD inquiry is that it treats temporal depth as an analytic resource rather than a longer evaluation window. Over years, P1’s archive developed texture—dense and sparse periods, clusters of artists, reappearances of earlier tastes, and shifts that became meaningful precisely because they recurred. Thus, the unit of analysis shifts from adoption or acceptance to an evolving entanglement of person–artifact–record–researcher. This complements and extends arguments in HCI that recognize the unique value of “samples of one” [23] when the aim is sustained, situated insight into change over time rather than generalizability.

To describe what changes across that duration, we introduce *re-domestication* as a recurring process rather than a one-time settling. Prior work on domestication has long shown that technologies become “placed” within domestic ecologies—physically, socially, and morally [28, 74, 75, 80]. Our account adds a vocabulary for how that placement is repeatedly re-decided across domestic and life-stage thresholds: not only where the artifact sits, but what it reveals, to whom, and under what conditions. Across the vignettes, the same Olo Radio is alternately a shared living-room resource, a protected bedroom artifact, an ambient companion, and a curated fixture within a new co-created domestic aesthetic. These are not linear stages of acceptance or appreciation; they are cycles of reconfiguration driven by shifting domestic arrangements and life-stage transitions.

Critically, re-domestication is not only about *where* an artifact belongs, but about its capacity to support ongoing oscillation between the foreground and background of domestic life over time and across changing contexts. In our case, long periods of ‘quiet availability’ and non-use were not a failure of engagement but a condition of longevity: Olo could be backgrounded for weeks, then become newly meaningful when a trigger emerged (e.g., an unexpected affect, an unfamiliar origin, a clash of past and present understanding of self). This suggests that in ultra-long-term deployments an RtD artifact’s value may hinge less on sustained interaction and more on its capacity to remain *returnable*—able to re-enter attention without demanding re-onboarding, re-justification, or constant maintenance work.

Relocation events make these dynamics especially visible. Moves operate as domestic thresholds that expose what is often hidden within project-time deployments: re-installation without researcher presence shifts responsibility, tests whether a research product can be re-homed, and reveals how much “success” depends on mundane capacities (packing, network setup, aesthetic placement, social and interpersonal tolerance, time to tinker). For research products and slow technology design artifacts, this pushes RtD practice beyond robustness toward reconfigurability across homes and life conditions as design qualities to be attended to. There are opportunities for future research to explore how *re-homing* could be mobilized as a design requirement and a research event. This includes designing for ‘inspectable’ dependencies (e.g., accounts, services, networking assumptions), envisioning legible recovery paths, and anticipating graceful degradation; documenting “re-installation events” as key analytic moments in field studies; and incorporating planned transitions (e.g., a “move kit,” a maintenance handover, periodic dependency audits) into deployment protocols. These techniques and approaches would not eliminate breakdowns, but they could make the labor and contingency of long-term living-with RtD artifacts more viable, traceable, and ethically manageable.

Taken together, extending “beyond long-term use” reorients how the significance of RtD artifacts might be framed over time. Rather than evaluating whether an artifact “worked”, our ultra-long-term account shows how a research product can become a durable interpretive resource: something that can recede, persist, and later return in ways that remain entangled with changing life conditions. This reframes success not as sustained use, but as the capacity to remain meaningfully re-engageable over time. How might research products be designed to support ongoing re-domestication across relationships, tastes, and shifting domestic arrangements as well as across multiple homes, or even familial and intergenerational trajectories? What concepts and methods might support and advance treating temporal depth as a unique and valuable outcome of RtD inquiry, rather than only a longer window onto familiar adoption dynamics? Together, these questions point to opportunities for HCI and design researchers to treat re-domestication—and the conditions that unsettle it—as central design qualities and analytic concerns in ultra-long-term RtD.

Finally, these dynamics also suggest connections to emerging work in more-than-human and posthumanist HCI, where technologies are understood as participants in relational configurations rather than passive tools (e.g., [4, 46, 67, 70, 76]). At an ultra-long-term timescale, artifacts such as Olo Radio do not simply support

human practices, but become enduring elements within evolving relational ecologies—shaping, and being shaped by, the rhythms, transitions, and attachments that constitute everyday life. This points to opportunities for future work to more explicitly connect slow technology and ultra-long-term RtD with more-than-human perspectives on design and relationality.

5.2 Evolving researcher–participant relations: temporality, care, and co-inquiry

Relational and reflexive perspectives in HCI emphasize that knowledge is co-produced through situated relationships, and that care, reciprocity, and responsible closure shape the conduct of the research itself—contact rhythms, accountability, and what becomes knowable over time—rather than sitting outside “the method” [2, 3, 21, 22, 81, 82]. Over a multi-year horizon, our account extends this work by showing how temporal depth can reorganize epistemic authority: who is positioned to notice, interpret, and credibly make sense of what an artifact is doing in a life. Early on, **P1** can “report experiences” while the researcher interprets and contextualizes. Over years, however, interpretive authority shifts toward the participant as they become the primary knower of Olo Radio: when it recedes and why, when it feels too exposed, what kinds of memories it can (and cannot) safely surface, and what it means to keep living with a record that outlasts platforms and devices. In Year 5 especially, this shift becomes visible as the conversation moves toward shared sensemaking—where **P1**’s hunches, interpretations, and emerging design desires increasingly set the analytic agenda. Accordingly, the relationship shifts toward co-inquiry, with the researcher increasingly tasked with following, listening, and creating space for questions that the artifact helps **P1** articulate.

This epistemic shift is entangled with care and obligation in both directions. **P1**’s ongoing commitment to keeping the artifact alive—including re-installations across moves and the everyday work of accommodating it within changing domestic arrangements—is a form of care for the research product and, indirectly, for the research relationship. Conversely, the researcher’s ongoing support—technical, infrastructural, and practical—and remaining responsive across long gaps becomes part of what sustains the participant’s ability to keep Olo Radio operable and the engagement viable. Importantly, the “shape” of the relationship is also conditioned by life events on both sides: periods of reduced contact (e.g., caregiving demands) widen the intervals between exchanges, shifting what can be noticed and how change is retrospectively interpreted. Over time, this mutuality can make conventional boundaries feel less sharply legible in practice, even when the formal roles remain—echoing prior accounts of care as reciprocally enacted rather than unidirectional (e.g., [21, 81]).

This is not simply “becoming friends,” nor is it adequately described as a bounded “deployment study.” Rather, this case points to a distinctive long-lived, artifact-mediated research relation characterized by intermittent contact, accumulated obligations, and evolving interpretive roles. The artifact becomes more than an object of study; it functions as a shared reference point that sustains continuity across gaps, while also making new forms of reciprocity possible—for instance, when **P1**’s situated expertise becomes central to analysis, and when decisions about continuation (e.g., re-homing in Year 6) must be negotiated rather than simply executed.

Prior work in HCI has argued that caring relations are methodologically consequential—shaping what participants share, what remains unsaid, and how knowledge is co-produced over time [20, 21, 44, 82, 90]. Our ultra-long-term RtD case extends this argument by showing care as an epistemic condition at multi-year scale: what becomes discernible about an artifact-in-life depends on maintaining a relationship in which participants can continue to speak, reinterpret, and revise what the artifact means as their lives change.

This raises questions for future research in the HCI and design communities. What methodological language—and study designs—might better account for long-lived, intermittent, artifact-mediated relations that sit between “study” and “friendship,” without collapsing them into either? How should consent and reciprocity be understood when interpretive expertise accumulates over time, and when participants’ interpretations become a primary analytic resource rather than “data” to be interpreted at a distance? And, what ethical and practical resources are needed when the relationship itself becomes part of the method—and the artifact becomes the medium through which obligations accrue—for example: planned re-consent touchpoints, explicit reciprocity practices, mutually agreed communication rhythms, and closure protocols that acknowledge attachment as well as the practical constraints of maintenance and withdrawal of an RtD artifact?

5.3 Continuation beyond project time: stewardship and translation

Research products often aspire to long-term engagement, yet “continuation” is commonly described in terms of sustained use, lingering affection, diffusion, or the “long tails” of artifacts that persist beyond funding horizons in ways researchers can only partially track (e.g., [1, 7, 25–27, 31]). Our case makes visible a different continuation dynamic that becomes legible at an ultra-long timescale: continuation as both stewardship and translation. Here, *stewardship* refers to the practical and ethical work of keeping an artifact operable and appropriate as lives, homes, and infrastructures change; whereas *translation* focuses on how what mattered in an artifact can be carried forward into new practices and, at times, new artifacts.

Year 6 makes stewardship visible as a negotiated form of continuation. Even when a research product is materially robust, its continued functioning remains contingent on platform policies, account infrastructures, network conditions, and the practicalities of care across distance—conditions that are largely outside the artifact itself. In our case, **P1**’s impending move transformed Olo’s status: what had been domestically stable became newly vulnerable to licensing regimes, firewall/network constraints, and time-zone distance that could slow troubleshooting. **P1**’s decision to return Olo was therefore not simply an “ending,” but a stewardship move—an attempt to preserve the artifact’s operability and meaning under changing constraints. This suggests a broader implication for long-term RtD: “longevity” is not a property of hardware alone, but a socio-technical achievement that requires ongoing allocation of labor, attention, and responsibility beyond the usual bounds of project time.

These dynamics also raise questions around environmental sustainability and material persistence. If research products are designed to endure beyond project timelines, what responsibilities

follow in terms of their continued material presence, re-use, or eventual return? Re-homing, maintenance, and long-term care are not only methodological and ethical concerns, but also ecological ones—pointing to the need to consider how bespoke research artifacts persist, circulate, and potentially accumulate across extended timescales.

At the same time, **P1**’s “vinyl scrobbler” surfaces translation as a second, distinct mode of continuation. Rather than “continuing” by keeping Olo, **P1** carried forward what Olo had made salient: listening as a practice that can leave a trace, and the value of a record that can be revisited and reinterpreted over time. The successor device was not a replacement but a re-materialization of slow technology design qualities into a new practice and form factor—one authored, built, and maintained by the participant. This suggests a generative possibility for research products: given enough time, living-with may cultivate not only reflective interpretation *with* an artifact (as slow technology often intends), but participant capacities and desires to author their own record-keeping systems—to create personal “histories” where existing platforms do not provide satisfying continuity. In this sense, ultra-long-term RtD can yield outcomes in which the participant becomes an ongoing designer of their own temporal traces, translating design qualities into everyday infrastructures.

Seeing continuation as both stewardship and translation also sharpens the methodological and ethical demands of ultra-long-term RtD. If artifacts may outlive their originating projects, contingency planning becomes more than logistics—it becomes part of a methodological and ethical requirement. Long-term deployments benefit from anticipating multiple endings and transformations: the artifact being returned, re-homed, loaned onward, or maintained by the participant with reduced researcher support. Concretely, this invites RtD protocols that treat “afterlives” as designable and negotiable: explicit dependency management (accounts/APIs/subscriptions), maintenance handovers (documentation, repair pathways), communication rhythms and re-consent touchpoints, and closure practices that acknowledge attachment rather than treating withdrawal as simple equipment retrieval. Making these plans explicit can also surface asymmetries that intensify over time—who controls infrastructures, who bears ongoing labor, and how obligations are negotiated as projects end and careers shift.

These considerations raise questions for future work. Under what conditions do long-term research products become generative for participant-led making, rather than remaining lived-with objects—and what design qualities are most likely to “travel” through translation? How should RtD practice grapple with the uncertainty of what long-term living-with may catalyze—when research products can quietly shape participants’ future practices, commitments, and acts of making beyond what researchers can foresee? And what review, ethics, and funding norms are needed to legitimate stewardship work—maintenance, re-homing, and negotiated closure—as a recognized site of knowledge production in design research, rather than backstage labor that remains methodologically invisible?

6 Conclusion, Limitations, and Future Work

This paper presents a situated account of an ultra-long-term entanglement between one participant, one RtD research product, and one researcher. Tracing Olo Radio across home moves, shifting domestic arrangements, and changing life circumstances shows how ultra-long-term RtD reveals dynamics that are difficult to access within typical project horizons: re-domestication as cyclical reconfiguration rather than one-time settling; temporal depth as an analytic resource that can shift interpretive authority toward participants; and continuation beyond project time as both stewardship and translation. Together, these contributions position ultra-long-term engagements not simply as “longer deployments,” but as qualitatively different sites of inquiry with distinct design, ethical, methodological, and infrastructural demands.

Our approach has clear limitations. It is a “sample of one,” grounded in a single participant, artifact, and relationship, and it cannot support general claims about long-term adoption or typical domestication trajectories. The vignettes are retrospective syntheses shaped by intermittent contact and the practical limits of long-term record-keeping, and our analysis is inseparable from the specific relational conditions that enabled the engagement to persist. Finally, Olo Radio’s slow technology orientation, its focus on everyday music listening and listening-history data, and the participant’s particular skills and interests—including the capacity to build a successor device—shaped what became possible in this case and may not transfer to other contexts or populations.

These limitations also point to areas for future work. First, additional ultra-long-term RtD accounts could broaden the empirical basis for understanding re-domestication across diverse households, infrastructures, and life circumstances. Second, comparative studies could examine how different research products “age” and what forms of stewardship they require, while methodological work could treat the afterlives of RtD artifacts—re-homing, maintenance handovers, and participant-led continuation—as explicit concerns for RtD practice. Finally, this work points to broader opportunities for practical and institutional experimentation, including review and funding criteria that recognize stewardship labor as legitimate knowledge production, and RtD practices that better support multi-year relationships where ethical responsibilities, consent rhythms, and closure must be renegotiated over time. In this sense, ultra-long-term RtD invites a shift from *designing for use to designing for lives*—where artifacts persist, recede, and return as part of ongoing human–technology relations.

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