Queer Archival Un/Making as Tangible Information Activism

Alexandra Teixeira Riggs
Georgia Institute of Technology
Atlanta, Georgia, USA
ariggs8@gatech.edu

Matthew Mosher
University of Central Florida
Orlando, Florida, USA
matthew.mosher@ucf.edu

Anne Sullivan
York University
Toronto, Ontario, Canada
annes@yorku.ca

Noura Howell
Georgia Institute of Technology
Atlanta, Georgia, USA
nhowell8@gatech.edu

Abstract

We introduce queer archival un/making, i.e. both making and unmaking with historical materials, which invites reflection on queer identities and community archives, toward information activist engagements (or, how LGBTQIA+ people strategically use communication technologies to access knowledge and further social movements). We hosted workshops where participants created buttons by drawing and collaging with materials from the Queer Zine Archive Project, then embedded buttons with their own personal oral histories. From our workshops, we provide the following design reflections on queer archival un/making: (1) un/making from queer perspectives encourages questioning, trying on, and exploring identities both personally and collectively; (2) queer archival un/making can encompass sharing artifacts outside of research institutions to engage community archives and information activist practices; (3) queer archival un/making invites reflections on what is missing from community archives and how un/making with historical materials can configure alternatives. Our design reflections expand the practices of unmaking in HCI by looking to queer archives, paralleling the messiness through which queer identities and histories are made and interpreted.

CCS Concepts

• **Human-centered computing** → **Empirical studies in HCI**; *HCI theory, concepts and models*; • **Social and professional topics** → **Sexual orientation**; **Gender**; • **Applied computing** → *Digital libraries and archives*.

Keywords

unmaking, queer HCI, queer archives, tangible interaction design

1 Introduction

As archives become increasingly algorithmically and politically mediated [10, 47], bias based on existing social inequalities continues to affect our relationships to historical data, particularly stories left undocumented or misrepresented [103]. Further, in our present sociopolitical context, we see increasing instances of epistemological erasure of LGBTQIA+ identities, through policies that promote anti-LGBTQIA+ hate speech [125], curriculum censorship [89], book banning [134], historical erasure [57], and anti-queer and anti-trans legislation on a US-based national and global scale [130]. In response, there has been a growing focus on the work of community archives and "doing history" outside of institutional contexts [75]. Particularly, in queer archival contexts, this has taken the form of "good enough" documenting, projects working quickly to archive "at-risk" queer content online [3, 50], and information activist projects that give access to vital connections and resources on LGBTQIA+ life and needs [15, 58, 75]. Information activism refers to the strategic use of communication technologies to create and disseminate messages that benefit communities and promote participation in social justice movements [19]. In our project, we draw from how information activism has been characterized in lesbian feminist histories, where these social movements have worked within scarce conditions to create communication infrastructures that bring access to precarious information about lesbian feminist, and subsequently LGBTQIA+ life [75]. In the present, as we lose access to queer knowledge both online and in institutional contexts, these projects become increasingly vital and even life saving.

Paralleling these endeavors, design research and HCI have also engaged with historicism [106, 107] and the work of "doing history" through community and personal archiving projects [124], participatory making [9, 100, 104], and tangible interaction design [93, 95]. In these projects, making and material practice is situated as the mode through which participants learn about, critically reflect on, and develop tangible responses to the historical status quo [92]. For instance, projects such as "Prototyping the Past" [100], "Doing History" by reverse engineering [9], and the "Making Core Memory" workshops [104] activate material practices that re-make technologies to fill absences in the historical record, reimagine historical technologies, or fabulate feminist entanglements of technological history and material practices. In this vein, we situate our work within a trajectory of historicist HCI engagements [107], bridging Queer HCI [122] and queer archival theory.

Figure 1: Participants un/make buttons using collage techniques and reproduced images, printed from the Queer Zine Archive Project's online database. Afterwards, participants can embed their collaged buttons with NFC (near field communication) tags and use our system to record oral histories into them, which they can later share with others by scanning the audio-enabled buttons with a smartphone.

In engaging material queer histories through design and HCI research, we draw from un/making, or a continuum of making and unmaking practices. As characterized by Song et al., unmaking "has emerged as a loose family of responses to the limits of a making-centered HCI" [109, p.1]. Unmaking has been used in participatory engagements [99], sustainable HCI to reimagine e-waste [72] and material lifecycles [21], more-than-human design and biodegra-dation [7]; as well as more subversive epistemological concerns such as unmaking AI biases [85], conceptions of marginalized users [121], material constructions of time [16], or assumptions surround-ing data [22]. Unmaking is also situated as a "queer alternative" to normative forms of making in HCI, where the idea of making itself is made unstable, situated, and relational [109, p.1]. Gaboury charac-terizes unmaking as queer computation, which foregrounds "queer techniques of refusal, misuse, and disruption that must nonethe-less work with and through contemporary digital technologies" [31, p.484]. Unmaking is thus a "a playful, half-serious, yet deeply political form of computational subversion" that exists outside of productive norms, while still working within existing technological systems [31, p.488]. In our project, we propose that un/making can parallel the efforts of queer community archiving projects amid the tensions of institutional record-keeping systems. While queer community archives often exist outside of institutions, they are frequently entangled with or supported by them, surfacing tensions between archival or research institutions and community-based efforts [65]. We therefore propose that *queer archival un/making*, or "doing queer histories" through this continual spectrum between making and unmaking, engages a material form of working through these tensions–between working within existing systems and sub-verting or reconfiguring them.

We conducted a series of workshops where participants reflected on queer histories and explored queer identities by making but-tons, embedded with personal oral histories (Figure 1), building on prior work [94, 95]. Buttons, much like T-shirts, flyers, or zines, are considered ephemera, and are central to queer records where traditional papers and archival materials are absent [84]. Following Riggs et al., we focused on making buttons in our workshop due to their significance in queer history and ability to be shared and worn outside of the research setting [95]. To create buttons, we invited participants to draw and use zines from the Queer Zine Archive Project (QZAP) [27, 49, 76–80, 131], cutting up and collaging frag-ments from these archival materials and reinterpreting them as their own. We chose to use zines from QZAP [80], a free online community database of queer zines, because the collaging process in making buttons paralleled the zine-making process, referring to how queer identities can be personally collaged and interpreted through material reconfiguration. After participants created their button designs, we embedded NFC (near field communication) tags inside of the button casings, which allowed participants to record their own oral histories into the buttons using a smartphone and our system, *Queerios*, adapted from Tolentino and Mosher's *Kurios* platform for embedding audio in physical objects [124]. Participants then reflected on how recording oral histories created a hidden, obscured element in their buttons—one that could be kept private or shared with their communities. These reflections prompted share-able, information-activist, engagements that could occur outside of an archival or research institution, contributing to collective LGBTQIA+ knowledge.

In our workshops, we collaged with historical zines from QZAP, which allowed our participants to reflect on their queer identities in the present, what resonated from the past, what seemed out of date or different, and how archiving in communities might differ from

traditional institutions. Doing so, our participants unmade or reconfigured zine materials using collaging practices, not to unmake a community archive, but to reflect on the nature of archives largely. While not all collaging projects should be considered un/making, we drew from a spectrum of making and unmaking, paralleling how participants might interpret histories unusually to materialize connections to their identities in the present. With queer archival un/making, we invited playful yet politically motivated material engagements that activated community archives and pointed towards queer information networks [75]. We contribute reflections on how unmaking in HCI can be expanded by looking to queer archives:

- We suggest how un/making from queer perspectives can encourage questioning and trying on identities and histories in tangible, silly, and uncertain explorations. As illustrated by our project, doing so through material pursuits can parallel epistemological unmaking, or questioning norms, of marginalized LGBTQIA+ identities.
- We offer ways that queer archival un/making can be a process of reconfiguring traditional archives and research institutions, towards alternative, community-based networks and information activist engagements. In our project, this took the form of take-home participant-crafted buttons with embedded audio that supported collectively sharing queer knowledge outside of the workshop setting.
- Through queer archival un/making, we also surface and invite further reflections on what is left out of community archives, how historical materials and their interpretations might erase difference, and how we might envision alternatives through reconfiguring these materials.

Our work contributes to unmaking as a methodological strategy in HCI through queer archival perspectives, offering design reflections on information activist projects that advance community archives.

1.1 Positionality

A1 is a queer, lesbian, gender non-conforming, White and Latinx researcher from a relatively middle-class upbringing in the United States. A2 is a heterosexual agender White artist from a working-class American upbringing. A3 is a gender non-conforming, queer, White, disabled, researcher, who was a first-generation college student, from a lower-class upbringing in the United States. A4 is a heterosexual cis White woman from a middle-class US upbringing. We bring together various queer, gender-nonconforming, and allied perspectives in this work. Our positionalities informed our research questions, design directions, and intersectional perspectives throughout this project. Particularly, our positionalities are undergirded by WEIRD (Western, Educated, Industrialized, Rich, and Democratic) perspectives, at Western institutions [71], which we return to in Discussion. Additionally, A1, A2, and A3's perspectives as gender-nonconforming and agender people informed their focus on issues of gender identity in this research. Lastly, A1's positionality as a queer, lesbian researcher informed their relationships to participants. This allowed them to connect readily with queer and lesbian identifying participants, being in and of their community [120], but this may have limited certain queer perspectives in recruitment. We discuss how our workshops could be further

expanded to accommodate a greater diversity of queer perspectives in Future Work.

2 Background

We draw from queer archival theory, while also pulling from queering methods in Queer HCI and STS. We also use forms of making and participatory embodied reflection to critically reflect on history, referring to critical fabulations [43, 48, 96, 119, 128], critical making [92], unmaking [31, 109], and counterfactual actions [28].

2.1 Queering in HCI

We look to prior work in Queer HCI, extending from Feminist HCI [4], which includes research about LGBTQIA+ communities, as well as how we might leverage queer theory in HCI [122]. Particularly, we join work that queers HCI, or leverages queer theory, to critically examine and reimagine technologies and sociotechnical systems [68, 113, 114, 126]. For instance, much recent work in queering HCI examines queering AI systems [69, 129], critiquing gendered content moderation [56, 62], queering/cripping technologies of productivity [55], designing trans technologies [36–39], and designing for and with marginalized bodies [17, 111, 112]. Specifically, we situate our work within the thread of leveraging queer theory for tangible, embodied reflection on historical materials [93, 95]. These prior works draw from Ahmed's *Queer Phenomenology* [1], Light's "HCI as Heterodoxy" [68], queer computation [5, 32, 61], and queer methods from humanities and STS [34] to purposefully critique, unsettle, and reimagine conceptions of interaction with tangible archival ephemera [93, 95].

Our workshops led to findings on queer self representation, concerning tangibly fashioning queer identities and selective self disclosure. As such, we also look to works that have covered selective self-representation, such as research on "social steganography," or revealing messages to those "in the know" [74]; identity play in transitional experiences [53]; indirect disclosure of sensitive experiences [2]; queer anonymity and selective self disclosure amid context collapse online [127]; and continual identity modulation, or the practice of adjusting queer identities online in relation to platform features and functions [25]. These prior works shed light on responses from our workshops that centered around "trying on" various queer identities in tangible explorations.

2.2 Queer Archives, Queer Theory, and Information Activism

We look to how queer archives research situates queer relationalities as central to the establishment of information activist networks, or networks that connect queer people with vital knowledge and resources. McKinney notes that lesbian feminism is at the heart of building and sustaining information networks to further social movements and provide access to communication and queer knowledge. These instances of information activism connect to queer digital technologies today and have historically enabled queer community-based record-keeping that challenges traditional forms of archiving [75]. Further, the coalitional and plural nature of queer community archives emphasizes the messiness among "feminist, queer, transfeminist, and lesbian-feminist histories" [75], and the "uncommon, irrational, imaginative, and / or unpredictable

relationships" between beings [61]. These queer, improvisational relations serve, as Halberstam notes, to contest heteronormative social relations as given, countering "the logics of success" defined by normative ideologies [40]. In other words, we look to how queerness is framed as coalitional, intersectional, and radically cooperative, foregrounding a multiplicity of identifications and experiences. We also draw from contemporary examples of information activist projects, such as Cifor and Rawson's work on the Homosaurus, an international vocabulary of LGBTQIA+ terminology [15], and Jonas et al.'s work with queer information networks in rural communities [58].

In our project, we look to how scholars have specifically worked with queer archives, such as QZAP [12, 65], archival infrastructures [15, 59], and computing histories [5, 30, 32, 91]. These projects negotiate between the fluidity of queer identities and experiences and the necessary language around queer knowledge production and archiving, which we similarly explore in our workshops. QZAP in particular, first launched in 2003 by Milo Miller and Christopher Wilde, is a "free online searchable database" of queer zines that are made available to "other queers, researchers, historians, punks, and anyone else who has an interest in DIY publishing and underground queer communities" [80]. The project's mission is to establish a living archive of past and present queer zines, encouraging current and emerging publishers to continue to create, valuing a collectivist approach and respecting a diversity of queer experiences [80]. In the spirit of QZAP's mission statement, our project seeks to continue in this collective zine-making tradition, not to unmake existing zines, but in solidarity with projects such as QZAP that respect queer traditions of repurposing and collaging to explore histories and identities.

2.3 Tangible Design for History and Archival Materials

We situate our workshops within prior research that explores tangible experiences for memory, history, and archives. For instance, much work has been done around physical interactions for exploring history, such as a large-scale cultural heritage storytelling experience with projection mapping [86], a physical interface for audio narratives [73], an urban soundscape to explore location-based histories [98], and a wearable experience whose design integrates cultural historical research [101].

Storytelling methods that incorporate physical objects, such as books [26] can serve as interfaces for learning about historical events [14] or making narrative decisions [118]. Tangible interfaces can also explore embodied memoirs [23] and personal locative histories [132], engendering affective, intimate connections through relational interaction and opacity [51] or autoethnography [52]. In this vein, the concept of tangible memory has also been explored in projects such as The Memory Box and The Living Memory Box [116], which established early guidelines for working with physical-digital mementos, such as using audio as narrative media, tagging a variety of objects, and including editable metadata [117]. Projects, such as Sonic Gems, demonstrate how audio memories can be preserved in physical form [88], and Sonic Souvenirs shows that sound is evocative and intimate when paired with physical objects [24]. Tales of Things implements a comprehensive system for tagging

physical objects with text and photos using a combination of NFC and QR codes [20], and *Kurios* draws from this, building on the concept of tangible memory [82, 124].

We look to participatory experiences that emphasize historicism, such as projects that remake fictitious, defunct technologies [100] and collaboratively reverse engineer historical artifacts [9]. Research has also focused on specific historical periods of marginalized histories, such as exploring Victorian women's roles as garment inventors [60]; designing wearable interactions with the Chinese 19th Century suffragette movement [101]; documenting the overlooked contributions of women in video game histories [8]; and engaging with women's work in hand-weaving early forms of computational memory [97, 104]. Along these lines, we look to physical experiences that center marginalized histories [13], such as works that incorporate community-based histories of activism [41]. Engaging with methods of historicism [106, 107] and tangible interaction, these works foreground past silences and exclusions in technological design [54, 64, 110, 133]. Further, recent works have explored how archival theory, particularly the concept of absence, can reframe bias in algorithmic systems by providing a space for fabulation, desire, and elasticity [103].

2.4 Critical Making, Unmaking, and Critical Fabulations

Critical making first situated the process of making as a co-constitutive act of developing shared conceptual understandings of critical sociotechnical issues, focusing on shared actions rather than artifacts [92]. As HCI increased focus on making and its outputs, often giving primacy to artifacts, a variety of unmaking strategies emerged as a response to the limits of a making-centered HCI, building on critical making's process-based foundations [109]. In our work, we primarily draw from unmaking in queer computation [31], while looking towards how unmaking has epistemologically countered normative models, such as in conceptions of marginalized users [121], constructions of time [16], assumptions around data [22], and AI biases [85]. We also recognize unmaking in sustainable HCI and more-than-human design [7, 21, 70, 72], as well as practices of uncrafting [83] and unmaking with- [85]. We lastly look to unmaking in participatory engagements, particularly in community settings [99], and bring practices of collaging with ephemera [29, 126], zineography [45, 46], and trans zine-making [63] into conversation with un/making, using a queer archival lens.

In bridging collective unmaking and histories, we also draw on counterfactual actions [28] and critical fabulations [43, 44, 48, 96, 119, 128]. Counterfactual actions recognize situated, embodied, performative engagements beyond artifacts in exploring the past [28]. Critical fabulations centers embodied ways of knowing that reconfigure the present with attention to histories; while recognizing the impossibility of our narrative efforts in fully representing bodies, identities, and pasts in contemporary technological contexts [96]. Our work leverages these threads of design research, exploring the impressions of objects from past histories, the actions that surround them, and the affective relationships they invite through making and unmaking.

In our work, we deepen unmaking from queer archival perspectives, drawing from historicist approaches, such as counterfactual

actions and critical fabulations, that seek to bring the past into conversation with contemporary HCI.

3 Design Process

In our workshops, we explored how participants made their own buttons and recorded personal oral histories in response to archival materials from the Gender and Sexuality Collections at Georgia State University [33] and archival zines from QZAP [80], drawing from and deepening un/making practices [109]. While Riggs et al. focused on inviting tangible reflections with buttons from the Gender and Sexuality Collections, our publication draws more from participant reflections on the QZAP zines, though we included historical buttons for participants to look through as examples at the start of our workshops. To gather materials from QZAP, A1 reached out to creators whose zines are included in the collection, and included their materials here with permission (Figure 2).

Figure 2: Pictured is a selection of covers and pages from the zines we used for un/making buttons. On the top row, we have included: Queer Action Figures Volumes 1-3, © Charlie Welch, Tom Hill, and Audra Farrell [27, 49, 131]. On the bottom row, we have: Gendercide Volumes 1, 2, and 5 © Milo Miller [76, 78, 79].

The zine creators who responded and whose materials were included in our workshops were Charlie Welch, Tom Hill, and Audra Farrell of Queer Action Figures Volumes 1-3, created in the 1990s and early 2000s [27, 49, 131] and Milo Miller, founder of QZAP and creator of Gendercide Volumes 1-5, created in the early 2000s [76–79]. The Queer Action Figures zines all use collaging techniques, as well as evocative, protest-focused imagery, to generate support for gay and lesbian movements in the 1990s and 2000s. We included these zines to similarly evoke the spirit of collage and to generate dialogue about queer resistance movements then and now. Gendercide Volumes 1-5 are personal accounts of gender fluidity, which we

included to invite conversations around gender, self-identification, and shifting language around queer identities over time. Zine creators were not known to the authors ahead of time, and A1 reached out to them via email, retrieved from QZAP's online public database. All zine creators featured in the project agreed to share their published zines, adding to our aim of collaborative un/making.

For the button making experience, we drew from Riggs et al. in their design of "Button Portraits" [94, 95], which is a tangible wearable experience for embodied interactions with archival buttons and oral histories. Riggs et al. used a bespoke soft pouch worn around the neck with a Raspberry Pi and (near field communication) NFC reader, which would read NFC tags on the corresponding button replicas and play oral histories through attached headphones. Building on this design to encourage collective making, we modified *Kurios*, a web application for embedding audio in physical objects [124], such that participants could scan and record to NFC tags embedded inside buttons. Our adapted system, entitled *Queerios*, enables participants to make their own button designs with an NFC tag sandwiched into the button backing (Figure 3). Participants could then scan these embedded NFC tags with a smartphone, allowing them to record their own stories after making buttons. Creating *Queerios* allowed us to both write to blank NFC tags, which would save participant oral histories, and read NFC tags that contained audio content from anywhere, with any smartphone.

Kurios, the platform *Queerios* is built on, is a smartphone web application, built in HTML, CSS, Javascript, PHP, and MySQL for saving and sharing audio stories embedded in physical objects. The system itself serves as its own archive, as it saves audio recordings and object identifiers on an anonymized web-based database. In our adapted system, we chose to use NFC tags to associate audio to objects, as opposed to other forms of tangible tagging such as quick-response (QR) codes, because NFC tags could be placed inside of the buttons without obscuring the artwork on the button face. QR code labels would either have to be incorporated into the design of the button face or placed on the back of the button, which would require participants to flip the button around to scan it, limiting or obscuring participants' designs. Additionally, embedding NFC tags inside of the buttons allowed for participants' audio content to be hidden, supporting our findings on privacy, self-presentation, and identity, which we unpack further in Findings and Discussion.

We prioritized the use of available hardware (i.e. smartphones), which would encourage easily sharing buttons outside of the workshop setting. When a participant scans a button with any smartphone, using the phone's internal NFC reader, they will see a webpage database entry for that button, its title, an optional image, and its associated audio content. The person who scanned the button can then listen to the associated audio or even record new audio to the button. While we did not ask participants to record multiple audio tracks to their buttons during our workshops, we detail this feature and its possibilities further in Future Work. In creating a web-based archive of oral histories, we also prioritized privacy by setting boundaries on the shareability of buttons' audio content. To control these settings, participants could create personal accounts in our system, allowing them to mark audio files as public or private or toggle the ability for others to add audio to their objects. Our system builds on the embodied intimacy that both Riggs et al.'s and Tolentino and Mosher's original designs engendered [95, 124].
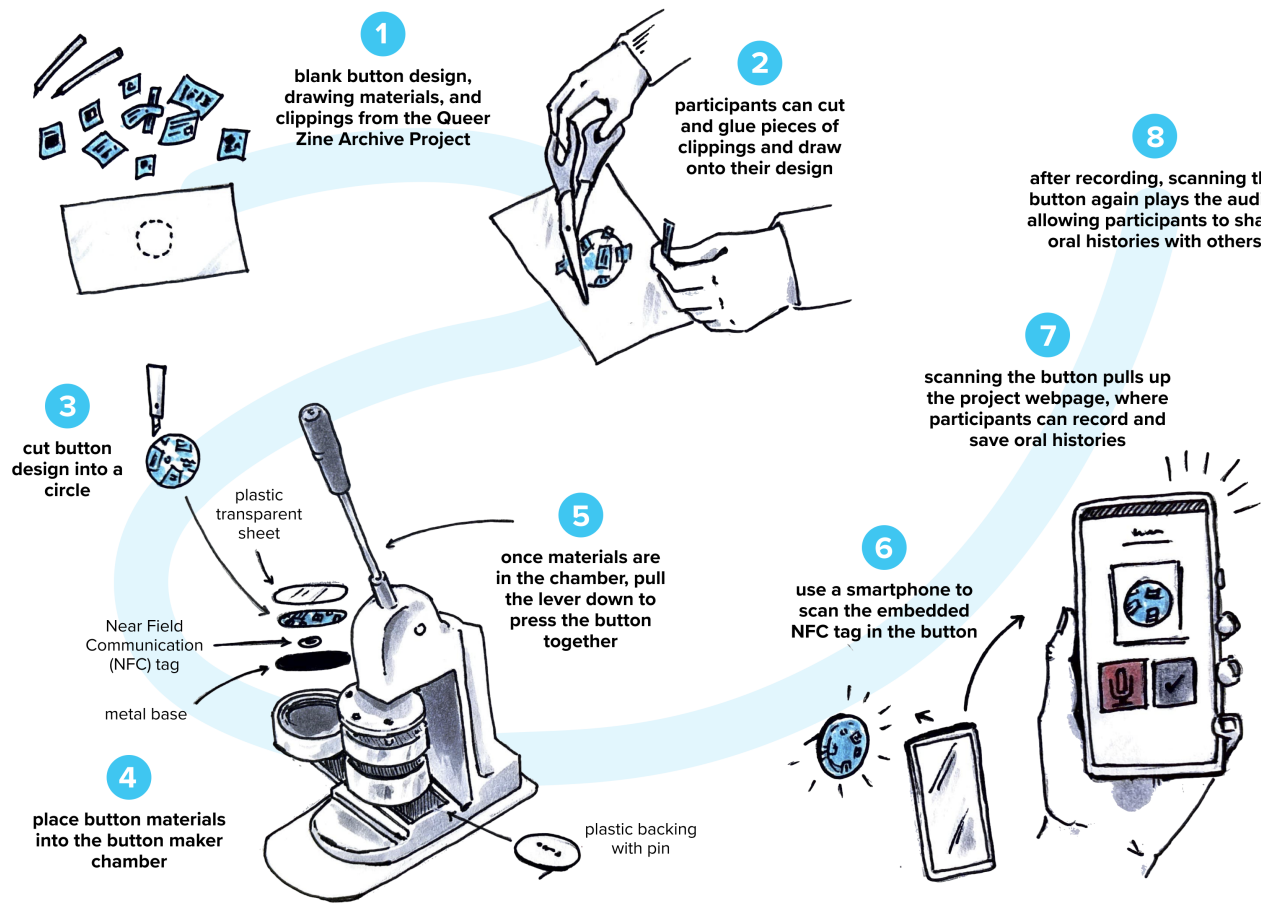
Figure 3: A diagram of how participants can create their own buttons using collage and drawing, embed an NFC tag into their button, scan their button using our web application, *Queerios*, and record their own audio. After recording audio and associating it with the button, scanning the button pulls up the audio for personal or social listening.

Through embedded tags and a flexible system for scanning and recording oral histories, we designed for increased participatory un/making, collaboration, and exploration outside of an institutional setting.

When interacting with physical buttons using our system, participants can use any smartphone that contains a built-in NFC reader to scan the surface of the button by placing the smartphone scanner over the button (Figure 4). Depending on the smartphone used, this interaction will result in a subtle haptic vibration, and on the phone, a prompt will ask the participant if they would like to open a link to our web application. If the participant taps on the notification, they will see a webpage that includes an image of the button and an option to play an audio track: the corresponding oral history. During our study, we attached headphones to university-provided smartphones to encourage a consistent private and intimate listening experience. However, as we detail in Findings, several participants decided to listen out-loud, collectively, using their own smartphones and corresponding speakers.

To record audio onto a button, participants could again use any smartphone to scan the NFC-enabled button they created. After scanning their button, participants could open our project webpage (Figure 4), this time with a blank entry, inviting participants to record their own oral histories. Participants could type in a title for their button and take a photo of it to use as their icon. Tapping the "Record" button started the audio recording function, and tapping "Stop" ended the recording. After finishing their recordings, participants could play back their audio, and if satisfied, tap the "Save" button on the interface to save their audio to their physical button. If unsatisfied with their audio, participants had the option to re-record by tapping delete and then the Record button again. Once saved, audio recordings were stored on our system's online database, but were associated specifically with their corresponding buttons and could only be accessed by physically scanning, as opposed to being shared publicly online. In this way, our project database served as a bridge between online queer archives, enabling buttons to be scanned from anywhere, and tangible records, because

Figure 4: A participant taps their smartphone to their button to scan the NFC tag embedded inside and pulls up a webpage dedicated to that object entry. On the webpage, they can title their button and then record a snippet of audio. After recording and saving their audio, they or others can scan their button again to hear it played back.

audio recordings could still only be accessed through their physical counterparts. Participants could therefore scan their buttons at any time after the workshop to listen to their recorded audio and share it with others. We discuss participants' attitudes towards listening to and sharing their recordings in our Findings section.

In the following section, we detail our workshop logistics and participant activities, including scanning archival buttons, materials and prompts used for making buttons (while unmaking with zines), recording audio onto buttons using our platform, debriefing on the un/making process, and participants' plans for sharing buttons with others outside of the workshops.

4 Study

4.1 Study Logistics

We held six workshops to explore how un/making with buttons and zines contributed to participants' reflections on queer history. Both A1 and A2 were present for workshops 1 and 2, and A1 was present for workshops 3-6. Both authors collaboratively created buttons alongside participants, recognizing our positions in and of queer communities [120], and sharing our own experiences of queerness alongside participants to encourage open conversation in a safe atmosphere. As such, we reflexively engaged in critical reflection on our roles in the workshops, including how our positionalities adjoined the practices and processes of this research [102]. In un/making alongside participants, we acknowledge how we as researchers co-construct knowledge with participants and are contextually situated in this research setting and process [42].

We aimed to have 2-3 people in each workshop to encourage participants to converse and reflect together in their un/making. Due to a scheduling issue, Workshop 2 had one participant, but both A1 and A2 were present and created buttons along with P3. All workshops were held at a university lab space. During each workshop, A1 introduced the study, followed consent procedures, and invited participants to use our system to interact with replica buttons from The Georgia State University Gender and Sexuality Collections, whose materials ranged from the 1970s to early 2000s [33]. A2 explained the use of our system and showed participants

how to scan buttons with the test smartphones provided by their university department. Participants were also given informational cards and references that pertained to each historical button while they interacted with them. Participants interacted with archival buttons for 15-20 minutes, then reflected on their experiences while making their own buttons.

When creating their own buttons, participants were given the option of drawing with markers and colored pencils, along with collaging with printed materials from QZAP [80] (Figure 5). Images from Queer Action Figures Volumes 1-3 [27, 49, 131] and Gendercide Volumes 1-5 [76–79] were included as collage materials for participants to use to create their buttons, as detailed in Section 3. To ensure that participants would have enough materials to choose from, we printed three copies of each zine to work from. Additionally, to support the collaborative nature of the workshops, we did not print new materials each time. Rather, we kept the clippings that participants discarded in previous workshops to serve as potential materials for subsequent workshops. As prompts for creating button designs, participants were given the following options to reflect on: "What does queer history mean to you?"; "What statement do you want to make with your button?"; or simply open-ended exploration. During this process, participants were encouraged to cut and collage clippings from QZAP onto their button designs, unmaking zine materials to reimagine them in their own collages.

Figure 5: Participants sift through clippings from QZAP to use in collaging their buttons.

After drawing and collaging, a programmable NFC tag was affixed to the button backing such that it was hidden under the participant's artwork. Participants were then given the option of using the button maker to press their buttons, or A1 would press the buttons if participants declined. Each programmable NFC tag linked to a dedicated webpage for that button (corresponding to an entry in our system), which was used for scanning and recording participant audio, including ambient sound and oral histories.

After creating their buttons, participants were given the university-provided test phones, used previously for scanning the archival buttons. With these, they could scan their own collaged buttons

Table 1: Self-identified demographics from all workshop participants, with all entries written as described by participants' answers to the demographic survey.

Participant	Workshop	Pronouns	Identify as Queer / Trans*	Race & Ethnicity	Age Range
P1	1	She/her	Yes	White	25-34
P2	1	She/her	Yes	White	25-34
P3	2	She/her	No, I'm a cis-het woman	Black American, non-Hispanic	18-24
P4	3	They/them	Yes / No-ish	White person european	35-44
P5	3	She/her	Queer / bisexual	White	25-34
P6	4	She/her	Yes	White	18-24
P7	4	She/her	Yes	White	18-24
P8	5	She/her	Queer	Arab	18-24
P9	5	She/her	bisexual	White	18-24
P10	6	She/her	No	Asian / Indian	25-34
P11	6	She/her	No	Asian (Indian)	25-34
P12	6	They/she	Nonbinary / woman	South Indian	25-34

and use our system to record their own audio. Participants were given the option of recording audio privately by leaving the room and walking around (P1-7, P10-12), or collectively by staying in the room with one another (P8-9). Participants could also choose to keep their recordings private (P1-7, P10-12), share them with each other in the room (P8-9), or share them with others outside of the study (P1, P3-10). After recording, participants were asked about their experiences creating buttons and recording audio, along with their thoughts on what they would do with their buttons afterwards (e.g. wearing them on their backpacks or jackets, or sharing with friends or strangers). Additionally, participants were asked to reflect on their interactions with un/making buttons, with our system, on the hidden elements of the buttons' NFC tags, and how they would feel when taking their buttons home with them after the study. We unpack these responses further in Findings and Discussion.

This study was IRB-approved, and we included a content warning in the consent form that that briefed participants about contextualized instances of transphobia, racism, ableism, and internalized homophobia that may be heard in the oral histories of the button replicas from the Gender and Sexuality Collections.

4.2 Participants

We recruited 12 participants total across 6 workshops (Table 1), using social networking platforms (Instagram, Microsoft Teams), snowball sampling, and the researchers' networks within the queer community. For attending, participants were each given a $20 gift certificate to Charis Books and More, a local independent feminist bookstore started in 1974, based in Decatur, Georgia [81]. In our recruitment text, participants were asked to sign up for the study in pairs or groups of three, so all participants knew each other going into the workshops. The only exception to this was one participant whose partner could not participate due to a scheduling conflict, and who completed the workshop alone, with both A1 and A2 present. Our inclusion criteria were for participants over the age of 18. Though we did not restrict participants to only members of the LGBTQIA+ community, 75% of participants identified as queer or trans (Table 1). Participants were given a demographic survey at the start of the workshop, with an open form field to

optionally add their pronouns and multi-line open form fields to optionally describe their gender, sexuality, and racial / ethnic identity. Eleven participants use "she/her" pronouns, while two use either "they/them" or "they/she" pronouns. We note that none of our participants use "he/him" pronouns, which we unpack further in our Limitations section. Additionally, we focused on workshops with participants that predominantly fell within the ages of 18-34, which allowed for historical reflection on QZAP materials from the 1990s and early 2000s, as well as buttons from the 1970s to early 2000s. However, we realize the potential for further reflection with older participants on historical materials, which we discuss in Future Work and Limitations. Additionally, seven participants had prior familiarity with the researchers, indicative of the research team being "in and of" the queer community in their local context [120]. While this elicited intimate responses from participants, we also unpack the limitations of this approach in Future Work and Limitations.

4.3 Data Collection and Analysis

We collected data from 6 workshops with 1-3 participants each by video and audio recording participants, as well as taking photographs. We video and audio recorded for the duration of the workshops, which lasted about 90-100 minutes each, with participants interacting with the system and archival buttons for 15-20 minutes, unmaking zines and making their own buttons for 30 minutes (Figure 6), recording audio for 15-20 minutes, then debriefing on the making and recording experience for 30 minutes. We debriefed with participants using semi-structured interviews, and we took detailed field notes on participants' reflections on their experiences.

After each workshop, A1 uploaded all video, audio, and photographic data to a secure university server. They transcribed all videos using Otter.ai, exported each transcription to Microsoft Word, then uploaded all transcriptions to ATLAS.ti for analysis. For analysis, we drew from Braun and Clarke's reflexive thematic analysis [11] to analyze participant experiences, seeking, "rich descriptions of participant experiences, along with the context specificity and depth associated with how participants interpret and understand

Figure 6: A selection of various buttons that both participants and researchers (A1 and A2) have made after participating in our workshops.

those experiences" [108, p.41]. In ATLAS.ti, A1 reviewed each transcript against its corresponding video to check for accuracy and correct transcription errors. They then developed first level codes using abductive analysis [123], which A2 subsequently reviewed and iterated on. A2 then developed second level code groups from the first level codes in ATLAS.ti, and both A1 and A2 brought both first level and second level code groups into a Figma file for thematic clustering. A3 and A4 reviewed all codes and code groups in both ATLAS.ti and Figma, asking questions that prompted A1 and A2 to clarify themes or revisit the data and revise themes. From thematic clustering of the data in Figma, A1 and A2 defined key themes, recognizing their positionalities and roles in co-creating knowledge, refining and clarifying these in discussions with A3 and A4.

5 Findings

5.1 Collaboratively Expressing Tangible Queer Identities

During the un/making process, imagery from QZAP prompted conversations and reflections on queer history and identity for many participants (P3-4, P6-7, P10-12). For instance, while collaging, P3 reflected on how a comic-book style image from the Queer Action Figures zine symbolized a fashioning of her identity (Figure 7). While cutting out the image and drawing onto it, P3 described a femme figure in an action pose: "She is at once, like defending and like, I don't know, like casting away some opposition, but also is prepared to deal with it if it continues to come. And I think that is so fitting for my life right now, yes. And I think, like, I felt a

little bit like she is reflective of me, but also an aspiration of mine." The imagery of the collage materials prompted reflections on queer identities, as well as adversarial messages related to political protest, organizing, or building queer communities.

Building on themes of identity, participants (P3-9) discussed how making buttons served as way to talk through their own feelings about gender and sexuality, as well as expressing everyday queer realities. Various participants mentioned the idea of fashioning or constructing queer identities through tangible objects, likening buttons to stickers or T-shirts (P3, P6-9). Wearing buttons strengthened their connection to queer identity, as P3 noted: "There's a sort of like convergence between the person, their body, their identity and this button." This experience of fashioning identities was supported by participants' engagement with un/making, or cutting up zines to then make buttons, that spoke to their individual queer perspectives.

Collage techniques, discussions among participants and researchers, and recording oral histories also proved a playful and expressive way for participants to collectively talk through uncertainties and connections in queer identities. P4 noted that collaging with others felt like "parallel play," or a way to work creatively on a solo pursuit while in the company of others, engaging both individual and collective reflections. Referring to the process of collaging buttons, P4 also remarked, "I feel like it unlocked everything I always think about and reminded me of my own perspective and my jokes that I make to myself. And I love collage. I think it's awesome. It allows you to make new connections. So, I feel like I could make some new connections but also remember my own narratives that I play with." P4's reactions to the process of collaging and the imagery provided

Figure 7: A participant cuts out and collages an image, evocative of a comic book character, from the Queer Action Figures zine [49]. The participant shared reflections on the parallels between the figure in the image and her identity.

allowed them to reflect on and make connections within their own queer experiences. Adding to this, P7 reflected on the un/making process, particularly collaging onto buttons, as paralleling the fluid experiences of trying on and identifying with a variety of labels before finding expressions that fit: "I know that now, labels are big for everyone. And I feel like labels can change a lot. And it's like having something physically be tangible of your own label and reassure you that, 'Oh yeah, that is me. I can be that.'" While collaging their buttons, participants sifted through the imagery from QZAP, often using images that others had cut up or discarded (P10, P11, P12). This collaborative process also paralleled participants' collective conversations about their buttons and influenced their recordings, whether they chose to record privately or together. Additionally, collage as a collaborative tactic served as a form of both unmaking, where participants could cut up existing zine materials, and making, when they repurposed these materials as their own button designs.

5.2 Subversive Humor in Collaborative Un/Making

Participants emphasized a clear undercurrent of subversive humor in both the collage imagery used and their own designs and recordings. For instance, reflecting on a collage that read "The New Gay Agenda," P5 noted,

> "Being queer is just like being supported to make your own choices in a myriad of different ways, whether about your identity, or who you choose to partner with or not partner with. And it makes me laugh, because that seems to be so problematic for people, or that it's a specific 'agenda.' But it's just the rights that people have. So, it's just a very basic concept that's somehow still contested."

In this case, P5 pointed out the subversiveness of their collage's wording and imagery (Figure 8) that could be used to communicate a tongue-in-cheek, yet powerful and adversarial message about queer rights. Their humorous reaction pokes fun at how right-wing

Figure 8: A cut-out paper button design that uses collage imagery, sitting alongside a button maker and materials to press the design into a button. The text reads: "The New Gay Agenda: Now Recruiting," which is a humorous subversion of right-wing panic and homophobic characterizations of LGBTQIA+ rights.

politics attempts to characterize queerness as a targeted, immoral "agenda" aimed at corrupting the public, while queer people simply desire the right to exist as themselves. Making humorous buttons that reflected on this topic proved to be a light-hearted, yet subversive way for participants to grapple with homophobia and transphobia, while alluding to deeper issues and forms of activism. P3 echoed this point, discussing the button making process: "It's fun, it's silly. Maybe it's a little campy, depending on how you do it, and you get to say something very powerful." Additionally, humor worked to relationally prompt dialogue and reflections among participants. For instance, P8 and P9 shared jokes about their own queer identities during the collaging process, which later influenced their decisions to collectively record audio messages that their friends would engage with and understand. Similarly, P4 and P5 joked throughout the button un/making process about what their buttons would represent about their queer identities and how these familiar sentiments might be understood differently in another context. This collective process of making buttons and the messages associated with the collage imagery elicited facetious, yet subversive sentiments from participants, while discussing topics such as protesting,

trans rights, organizing, or queer identities. Collaborative humor both related to shared queer experiences and communicated powerful messages of protest. Additionally, subversive humor worked to unmake instances of homophobia and transphobia, reclaiming queer identities and resistance movements.

5.3 Introspection in Hidden Audio Recordings

During workshops, ten participants decided to record their messages privately (P1-7, P10-12), leaving the room to walk around outside, while two recorded in front of each other (P8, P9). From participant reflections after recording, those that chose to record privately shared that their recordings were more introspective or diaristic, while those that recorded collectively shared more humorous messages. For instance, P11 discussed a sentimental quality in her recording, noting that the hidden NFC tag contributed to this tone: "I got really sentimental. I think we can chat and reflect as a group, where we can make it humorous or jokey. But when you're by yourself sitting there, getting your thoughts together, it's a different process... It forces a bit of a deeper reflection." P3 also

remarked that the button's audio track could speak to place-based experiences, having recorded the traffic outside the building, footsteps, and other ambient sounds alongside her reflection. She notes that the button's recording "has all that symbolic value because it is so attached to the place that I made it in, the time that I made it in, the headspace that I made it in." While P3 felt more comfortable recording audio, other participants were hesitant, feeling pressure to articulate themselves in a spoken format at first. For instance, P10 describes the experience of feeling uncomfortable at first, but easing herself into the process through the metaphor of social media. She notes, "So anytime I hear myself after recording, I hate it. However, I've gotten more comfortable, because sometimes I just record on my private Instagram story. So, I just treated it that way, like it's going to be seen by my closest friends. And because this one had a personal story attached it, I just thought about that." Imagining recordings as either messages to friends or voice diary entries seemed to ease participants into the process of speaking aloud. Additionally, the reflective quality of the audio recordings underscored the layers of identity that participants could express with their buttons: an outward visual design that could be shown publicly, and an introspective recording that could be kept private or shared selectively.

5.4 Queer Significance in Sharing Hidden Elements

Discussing the potential for wearing and sharing buttons that they had created, participants highlighted how the button and its hidden audio component held a particular queer significance. Several participants mentioned that having a hidden message reminded them of "flagging" or subtly signaling queerness in some way [6]. Flagging, or the hanky code, is a way of communicating sexual preferences to other queer people depending on the color of the handkerchief worn in a back pocket. P1 likened buttons and their hidden audio to this practice, saying, "It feels like, flagging. Like a secret message for those in the know. But those who don't need to know get passed on by and they'll never know that you have a secret message on your shirt." Many other participants echoed this framing (P1, P3-12), saying that the buttons represented a kind of shibboleth—a cultural in-group marker, or a form of signaling, suggesting, "if you know, you know." Participants connected this signaling to collectively sharing information with those in the know, with P3 even bringing up social media, saying, "I think buttons are kind of like a proto-Instagram bio. You're flagging and signaling something about yourself in a more permanent way." Buttons and their shareability served as expressions of identity but were also meant to communicate to others in some way. When discussing how they would share buttons with others, participants emphasized that buttons were meant to be worn, seen, and asked about (P6-P10). For instance, P6 highlighted, "I would wear the buttons when I want people to ask me about them," and P8 echoed this, saying, "I will gladly explain what it means, but you've got to ask the question first." These characterizations underscored the idea of buttons with hidden audio as tangible invitations for engagement and connection, particularly for those in the know.

When asked about wearing buttons around and sharing them, participants were selective with their responses. Many were excited

to wear buttons on their jackets or backpacks (P1, P3, P5-6, P8-9), and several participants mentioned only wanting to share the audio with close friends or if explicitly asked about their meaning (P3-10). For instance, P6 characterized this decision: "I think if they say, 'Oh, I like your button,' I'll be like, 'give me your phone. Watch this.'" In many cases, the button served as an invitation for dialogue—particularly one that could be tuned to specific contexts or communities. A few participants took this interaction further, suggesting that it could speak to finding shared queer experiences or negotiating dialogue about questioning or coming out. P8 discussed this potential for finding queer connection, saying, "I think that it's a good way to open the conversation... I think that there are so many people who are like me that feel so alone because they're like, 'Who do I ask about this,' and they don't see people who are comfortable enough talking about it to go and talk to them." In this way, buttons and their hidden audio could open a space of dialogue about queerness in subtle, selective ways. Another component of the button interactions that could open further dialogue is the potential for ambiguity in both button designs and recordings, which P8 also notes. Both P8 and P9 decided to record audio in front of each other, sharing short phrases that would be understood and appreciated by queer people in their friend group. These messages were humorous but also ambiguous, alluding to a joke that only select few would understand. P8 discusses her reasoning for recording a pithy, ambiguous phrase:

> "I would argue that the 'funny [recording]' inside the button adds layers to it, because if I wanted to sit and marinate on it, I could put something really personal in here, but because I didn't, then this opens dialog, which is always super fun. Because especially when you're talking to other queer people, sometimes that dialog is more valuable than just sharing one story. But when you sit down and talk about it and you make it an interactive experience, it becomes something bigger than just this pin."

In this way, ambiguous messaging and contextual sharing take part in prompting dialogue between queer individuals, facilitated by button interactions.

5.5 Queering Archives through Un/Making and Sharing

When discussing sharing buttons outside of the study, several participants mentioned how this interaction functioned as a way of queering archives—or reimagining archives outside of institutions. For instance, P5 described their personal collection of buttons, and P7 mentioned how engaging with buttons could be likened to legitimizing histories outside of institutions: "It's like legitimizing what's outside the museum as also part of history, and people are engaging with buttons in community contexts." Similarly, P4 related that queering the archive meant reimagining it for themselves, P10 brought up the metaphor of a "walking museum," and P3 discussed how recording onto buttons served as a form of "decolonial documenting that is so a part of oral history." By having the recording inside of the button, it tied the oral history to the object itself, which, as P3 mentions, "is inextricably linking the voice journaling that I probably would have done after this experience

anyway." By connecting the oral history and button, the archive could be shared and worn outside of a collection. P3's commentary on this experience speaks to community-based archives, often of marginalized histories, outside of traditional institutions. In creating these community-based archives, participants also emphasized the responsibility of collections towards representing marginalized perspectives, such as trans, non-Western, and BIPOC perspectives, even within larger queer communities.

6 Discussion

Through our six workshops, we observed and engaged with how participants used tangible collage materials and techniques, combined with our *Queerios* system, to create buttons that reflected on queer histories and identities. In our workshops, we used both unmaking and making tactics, referring to a spectrum of un/making practices in queering archives. We unmake by collaging zines from QZAP, reflecting on archival materials to interpret queer language and imagery in contemporary contexts. We also make buttons and oral histories, reflecting on queer histories and identities through the creating process. Song et al. describe how "unmaking is intrinsically entangled with virtually all aspects of making, including materials, histories, and geographies: in a very real way, there is no unmaking without making, and vice versa" [109, p.5]. As such, our workshops engaged both unmaking and making processes, illustrating the continuum of states in between that surround these artifacts. These fluid processes invited participants to materially engage with how queer identities are collaged together through continual layering, interpreting, and relating to queer histories. Further, we echo Taylor et al. in unmaking HCI interpretations of marginalized communities [121] by exploring the expansive spectrum of queer identities and histories through tangible, material processes. It is crucial to note that in our contemporary sociopolitical context, where LGBTQIA+ voices are being silenced [125] and records are actively being erased [57], we do not advocate for uses of unmaking that deliberately falsify or eradicate LGBTQIA+ knowledge, perpetuating epistemological violence. Rather, we use un/making to purposefully push against such systems of erasure by eliciting personal reflections through material practices.

In the following sections, we reflect on:

- **queer un/making of tangible identities** as questioning and exploring personal histories
- **making queer information activism with archives** as a way to collectively share marginalized knowledge
- **reflecting on marginalized histories and community archives through queer archival un/making**– a tactic for reconfiguring not only the materials but also the structures of traditional archives, towards distributed community collections

From our findings, we outline several design opportunities for deepening un/making when working with queer communities and historical materials.

6.1 Queer Un/Making of Tangible Identities

We gathered feedback on how un/making processes, particularly collaging onto buttons using the imagery from QZAP, along with

the nature of the hidden audio recordings, paralleled queer experiences. Not only did the archival materials prompt reflection on queer identities, but also the un/making processes themselves evoked queer experiences and referred to queer histories. For instance, participants reflected on how collaging paralleled the fluid experiences of trying on and identifying with a variety of labels within the queer umbrella before finding expressions that fit. This exploration not only speaks to queerness' fluidity but also to the pressures faced when needing to identify with a label or represent oneself in a particular way. The collaging methods participants used to stitch together queer identities recall Fox et al.'s work in crafting everyday resistance through buttons and zines [29]. Our un/making work builds on how these techniques can serve not only as strategies for resistance, but also for queer expression, paralleling unmaking and making of identities. Further, using fragments of zine materials in un/making underscores, as Hay notes, the importance of zines in HCI as a tool for expression and connection to others [45, 46]. Using collage techniques that draw from zine making, participants could cut up, scratch out, or layer over an image or phrase that didn't fit their expression. In this way, unmaking and reconfiguring zine materials to make buttons paralleled the messy, fluid process of queer identification. By characterizing this work as unmaking, we join both material un/making projects with epistemological unmaking endeavors. Taylor et al.'s work on epistemological unmaking urges HCI practitioners to more carefully examine their conceptions of marginalized users in research [121]. We echo this move towards plural and intersectional understandings of LGBTQIA+ communities, while also inviting practices of material un/making in pursuit of exploring multiple queer identities. Our project highlights how expansive, **queer modes of un/making, such as collaging or other material reconfiguring of archival materials, can parallel and support epistemological pursuits of unmaking, such as questioning the categories used to identify marginalized users in HCI research.**

These queer modes of un/making, between collaging and creating layers of meaning through objects and audio, also evoke queer forms of misuse [66], mischief [68], or silliness [40]. The act of "trying on," whether by unmaking various collage clippings or wearing buttons, parallels the uncertainties and ambiguities in queer experiences—questioning, trying on, playing with, and moving through identities fluidly. Additionally, misuse, mischief, and silliness in fashioning queer identities echo themes in queer theory that emphasize a refusal to be made useful or productive [31, 40]. This characterization recalls the entangled nature of unmaking, which Gaboury details: "making is a productive practice that points towards political intervention," while unmaking "exists outside of productive, protocological norms" [31, p.488]. In un/making tangible queer identities, participants might similarly *make* buttons (or other ephemera such as zines) as a productive practice of self-identification, while *unmaking* in silly, unproductive ways that encourage questioning, trying-on, and exploring. Our project illustrates how foregrounding silliness, humor, and uncertainty [105], while working from within existing technological systems, can invite design researchers to approach un/making projects through queer lenses. **Doing so can encourage questioning, trying on, and exploring identities and histories in tangible, messy explorations that nevertheless relay powerful messages of queer protest and resistance.**

6.2 "If you know, you know" – Making Queer Information Activism

Participants highlighted that wearing and sharing their collaged buttons with hidden audio elements felt particularly queer. The buttons themselves referenced community practices that signaled queer identity and sexuality to those in the know. For instance, participants likened the layered hidden audio components to flagging, a reference to the hanky code of gay sexual subcultures in the 1970s [6]. Further, making hidden audio recordings inside of buttons served as an additional layer that could signal an action or invitation. Many also spoke about having an ambiguous button design, while recording a more introspective or sentimental audio snippet. This distinction between the button's surface and the hidden, more introspective recording speaks to a layering of identities, where people can create different levels and types of messaging through tangible media, both hidden and visible. This layering suggests a strong thematic connection between context switching within queer communities, where queer individuals can decide which facets of their identity to share with whom and in what context, recalling prior work on queer self-representation online [25, 127]. This theme is particularly salient for queer individuals who have not come out to certain groups or who might contextually change their pronouns or identification for safety reasons. Buttons and their hidden audio components thus provide an active interaction through which this context switching can be tangibly enacted in subtle and subversive ways. Further, these choices are underscored by individuals' abilities to make their own tangible buttons and recordings, deciding which facets of the making process are private and introspective or public and collective. By making tangible these layered interactions, we point towards designing with opacity [35, 51], or designing for privacy in a world of public surveillance [87], where individuals can retain private, ineffable qualities or contextually fashion and present identities based on situated, active choices. **These themes of opacity and situatedness in queer identities open possibilities for un/making projects to consider both collective experiences as well as affordances for private, individual reflection.**

By reflecting on when they might choose to wear their buttons and perhaps share the embedded audio, participants characterized buttons not simply as archival objects, but as active invitations for conversations or experiences. Buttons thus functioned as objects that could operationalize the collective sharing of queer knowledge, underscoring how un/making through collaging buttons could extend beyond the workshop environment, into ongoing actions and engagements. Buttons, with their shareable, *Queerios*-embedded audio, could thus be viewed as active objects that prompt information activism, or, as McKinney notes, the "affective labor that produces collectivity, or the spaces and contexts in which individuals might feel part of something" [75, p.22]. This information activism builds "counterpublics" by building shared infrastructures that have been and continue to be "critical to the construction of feminist histories" [75, p.27]. Like newsletters or lesbian telephone hotlines, which McKinney discusses, these buttons similarly grant the potential for "interconnected social movement technologies" through their interactive affordances and connections to radical queer histories.

Further, by making their own buttons and discussing their networked potential, queer people tangibly engage in collective action, mirroring the shared labor, or an "ongoing, urgent drive to imagine, critique, and repurpose information from the past," that characterizes queer archives then and now [75, p.25]. **Our project suggests how designers can leverage queer archival un/making to engage participants in this collective labor of repurposing the past, paralleling the work of queer archivists and speaking to ongoing activist movements today.**

Additionally, this project reinforces and materializes design pursuits that Jonas et al. proposed in their research with rural LGBTQIA+ communities, in which they find that information sharing among queer people takes place in situated, social interactions [58]. With tangible, audio-embedded buttons, we echo Jonas et al.'s call for "locally-based technologies" [58, p.27] that enable queer information activism, adding the collective action of making such technologies as part of the process of sharing queer knowledge. Creating one's own button, coupled with the ongoing process of sharing its hidden audio, articulates these collective actions that engage histories [28]. Specifically, tangibly enacting how information about queer individuals might be created, shared, and expanded into networks of activism in some sense parallels and contributes to social movements. Doing this work forms a material and social connection to queer activist movements in history, carrying through to the present, with the potential to extend beyond the workshop environment. In this case, we also purposefully blur the lines between design researchers who might facilitate this work and participants who design their own buttons, following co-design principles [115]. Though our recommendations more broadly refer to design researchers, we nevertheless recognize that both facilitators and participants are entangled in a process of joint inquiry through design. For those who facilitate this work, we invite their archival un/making projects to draw from situated, cultural touchpoints that parallel social movements, extending interactions and reflections beyond archival and research institutions. In other words, **design researchers might consider projects that enliven the collective sharing of marginalized knowledge outside of the workshop setting, using un/making as a tactic for collective reflection and reconfiguration.**

6.3 Reflecting on Marginalized Histories and Community Archives

Many participants independently brought up how making their own buttons could contribute to ongoing histories outside of traditional institutions, reimagining archives for themselves and their communities. These findings parallel how community archives, and information activist engagements that enliven them, open traditional archival processes up to critique by imaging alternatives. Community archives, or "archiving from below" acts "as a form of protest [that] communities use to imagine other kinds of histories and futures," [75, p.15]. "Archiving from below"-as-protest is entangled with the information activism that engages queer people in mutual aid, knowledge-sharing, and archiving projects that document precarious information about LGBTQIA+ lives. We liken our workshops with buttons to this information activism that contributes to queer community archives and knowledge sharing. In

other words, we engage in un/making to reconfigure, document, and share entangled histories and identities in alternative ways. In this case, we sourced our zine materials from QZAP, which is a community archive itself. Our workshops in turn contributed to ongoing queer community archives by repurposing zine materials in un/making pursuits: participants reflected on zines from the 1990s and 2000s, reconfigured or un/made terms that didn't fit their present identities, and featured expressions that resonated. Through these reconfigurations, participants reflected largely on what archiving could look like outside of institutional contexts, while fashioning their own situated archival materials.

Though these perspectives emphasize how our workshops contributed to ongoing community archiving outside of institutions, there are nevertheless tensions to call out within these spaces. First, we look to tensions that McKinney surfaces around specifically queer community archives: "Community archives organized around gender and sexuality… can be complicit in sustaining cis-normative and racist practices within the field, framing queerness as a unifying experience of historical erasure at the cost of attending meaningfully to other axes of difference" [75, p.15]. Thus, even the work of critically unmaking archives outside of institutions can uphold cis-normative, racist, and Western perspectives of queerness. We note this as both a limitation in our own workshops and an area for further responsibility in community archive engagements. While our decision to use QZAP imagery in our workshops provided queer historical materials to reflect on and identify with, these materials nevertheless emphasized a specifically Western perspective due to the zines that we included. A few participants noted this limitation, expressing the desire for materials that would evoke non-Western queer imagery and identities. By calling out this limitation, and in turn its emphasis on WEIRD (Western, Educated, Industrialized, Rich, and Democratic) perspectives in research [71], we emphasize how community archival making projects can nevertheless paint over axes of difference in queer identities and histories, despite their queer theoretical commitments. By articulating these tensions through un/making, echoing past work that uses un/making as provocation for discussion [99], participants critically reflected on omissions in our collage materials, envisioning alternatives by creating their own designs that diverged from predominantly Western imagery. Un/making thus served to materially "unpack acrimonious histories" [75, p.23] or tensions within marginalized communities and their archives, thinking through the negative spaces, or what has been left out of material histories.

Making with historical materials, particularly concerning queer communities and archives, can often erase axes of difference in efforts to unify queer perspectives. In this case, the materials used within such engagements—such as those from QZAP, can provide opportunities for critical reflection on what is left out of community archives, differences within queer communities, and how to envision alternatives to homogenizing queer perspectives, echoing Taylor et al. [122]. **We therefore propose that queer archival un/making can invite reflection on what is left out of community archives, how historical artifacts and their interpretations might erase difference, and how we might envision alternatives in reconfiguring these materials.**

7 Limitations and Future Work

We first note several demographic limitations in our work, such as a lack of participants who use "he/him" pronouns, having prior familiarity with seven participants, and an emphasis on Western queer perspectives. Reflecting on the lack of participants who use "he/him" pronouns, we note that our recruitment text included compensation in the form of a gift card to Charis Books and More, a lesbian feminist bookstore located on the campus of Agnes Scott College, a private women's liberal arts college [81]. While it was important to the research team to compensate participants by supporting a local queer space, the situatedness of the bookstore at a women's college may have influenced recruitment, and we note this as a limitation. Additionally, while we believe that having prior familiarity with seven of our participants elicited intimate responses on identity and the materials presented, we acknowledge that in some cases this can lead to participants indulging researchers or giving overly positive responses [90]. Lastly, we recognize our focus on younger adults and acknowledge the potential for future work on historical reflection with older adults. For instance, having an older member of the queer community share their archival materials or having pairs of older and younger participants materially reflect together.

While collaging with QZAP materials, several participants (P10-12) also encouraged the researchers to further emphasize non-Western or de-colonial perspectives by offering a wider variety of collage materials, as mentioned in Section 6.3 of our Discussion. In future work, we will expand our set of materials, looking beyond Western perspectives and probing further into critical de-colonial perspectives on queer archives. Additionally, future work will be concerned more specifically with recruiting a more gender-diverse pool of participants, looking towards inclusion of more trans and gender-expansive identities. Though we made deliberate efforts to recruit BIPOC participants, 58% of our participants were White and only four participants expressed non-Western perspectives. In future work, we not only look towards centering QTBIPOC (Queer, trans, Black, Indigenous, People of Color) experiences, but also towards eschewing single-axis design, where only singular queer experiences are considered, and grounding our work in design justice that "challenges white supremacy, heteropatriarchy, capitalism, ableism, settler colonialism, and other forms of structural inequality." [18, p.19].

We also look to further exploring audio recording and longer term studies with buttons. Future work could look to how participants might record multiple audio tracks onto their buttons, particularly those that are not exclusively limited to oral histories or voice recordings. With this direction, we could invite participants to record ambient audio, choose from a wider variety of sounds, or even record onto each other's buttons. Additionally, with future work, we seek to understand how participants share and continue to use their buttons outside of the context of a workshop or university setting. With a longer-term diary study, we could also invite participants to explore recording multiple tracks to their buttons, with the option of recording other sounds beyond voice. Understanding participants' interests and activities in longer term making practices will expand the reflective possibilities of buttons and *Queerios*, as well as their roles in community archives. Further, exploring how participants use and share buttons over a longer period of time

will speak to the sociopolitical environment in which our work is situated. For instance, as our research is located in the Southern US, we might hear from participants who consider issues of safety and visibility if buttons are worn around. We might also hear reflections on what might happen if buttons are lost or discarded, which could lead to future un/making work, in conversation with reimagining e-waste [72], material lifecycles [21], biodegradation [7], and discard studies [67].

8 Conclusion

In this paper, we introduced queer archival un/making and shared how this process invited reflections on queer identities and community archives, towards information activist engagements. We reflected on the following aspects of queer archival un/making: (1) questioning and exploring identities and histories in material explorations can parallel the epistemological work of unmaking categories of marginalized users; (2) queer archival un/making can take shape in reconfiguring traditional archives, towards community-based networks of information activism; (3) queer archival un/making can invite reflections on what is missing in community archives and configuring alternatives. Our reflections deepen our understanding of unmaking in HCI by attuning to queer computation and archival theory, towards queer archival un/making, which speaks to how histories are continually interpreted and enlivened through material exploration.

Acknowledgments

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