

Making Space to Talk: A Hybrid Approach to People-Powered Research

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Abstract

Communities & Crowds is an AHRC-funded (2021-24) collaborative project between volunteer researchers and staff at the National Science and Media Museum, Bradford, National Museum of Scotland, and Zooniverse teams at Oxford University and the Adler Planetarium, Chicago. The *Communities & Crowds* team used an action research approach to test out how local in-person volunteer researchers might be supported within a cultural heritage institution (CHI) to lead the development and creation of a crowdsourcing project relevant to their own interests and aspirations.

In this article we use the *Communities & Crowds* experiments at the National Science and Media Museum as a case study to draw out how co-creation and action research can be brought together with online crowdsourcing to enrich volunteering experiences and institutional knowledge about CHI photographic collections. We argue that the careful co-creation of bespoke spaces for conversation and critical reflection were essential to the successful realisation of an online crowdsourcing project on the platform Zooniverse.

Keywords: Participation, Action Research, Museum Volunteering, Crowdsourcing, Digital Humanities, Reflective Practice

Introduction

They say a photograph is worth 1000 words. And for the project the photograph is a vehicle for us to go from the archive into the community. (SMG 2023b, 6).

Communities & Crowds sought to address longstanding issues of accessibility and engagement with photographic archival collections in cultural heritage institutions (CHIs) by developing a hybrid approach to people-powered research. Despite ongoing work to make museums more open, accessible and participatory, there remain considerable barriers for local communities to engage with collections and archives (Lynch 2019: 115-126) which are not on public display. Meanwhile, efforts to create opportunities for broader international publics to contribute to cultural heritage research online through crowdsourcing projects have tended to offer pre-defined and narrowly-focused engagement with collections (Beck et al. 2022). In this article we outline and critically reflect upon our experience of using a participatory action research (PAR) approach to develop dialogical spaces where in-person (local) and online (international) volunteer researchers could connect with each other and with institutional staff to conduct research into photographic collections.

Between 2021 and 2023, the project team at the National Science and Media Museum (NSMM) in Bradford, UK, worked with four local volunteer-researchers to curate, document and digitise a selection of archival photographs. We used the digitised and inventoried photographs to co-create a project on the Zooniverse crowdsourcing platform. This project was designed to engage an international community of online volunteers in our efforts to make these images more visible and discoverable.

Communities & Crowds had two symbiotic goals for our PAR experiments: creating

spaces to talk together in different environments (the archive, the museum cafe, community spaces, our inventorying platform, and online); and the co-creation of the online crowdsourcing project. In this article we argue that the first of these was critical to the realisation of the crowdsourcing project. However, we also demonstrate how the process of making a crowdsourcing project created the space and focus to talk about challenging issues in the photographic collections. We collaborated in each step of the project: from the selection of images to the process of digitisation, to the creation and launch of the crowdsourcing project. We argue that this process of dialogical collective inquiry into the making of an online crowdsourcing project can drive new research on photographic archives that is built on local community interests but of global reach.

In keeping with this dialogical ethos, this article is written collaboratively. We are taking a multi-perspectival, reflexive approach by focusing on surfacing and analysing the personal experiences of the collective actors (both staff and volunteer-researchers) throughout the different stages of the project. The voice of the individual volunteer-researchers cited throughout the article is extracted from three structured interviews, undertaken by the audience research team at the Science Museum Group (SMG) at the start of the volunteer work (December 2021), at the end of the digitisation work (February 2023) and after launching the crowdsourcing project (October 2023). While there have been different individual contributions to the work (see Author Contribution Statement and Acknowledgements), we are consciously using the first-person plural pronoun 'we' throughout to reinforce the collective aspect of this work.

The *Communities & Crowds* Project

Communities & Crowds was a three-year AHRC-funded project carried out in collaboration with volunteers and staff members from the NSMM, the National Museum of Scotland (NMS) in Edinburgh, and the Zooniverse teams at Oxford University and the Adler Planetarium in Chicago. The idea emerged out of a shared desire to develop and experiment with processes that could offer volunteers increased agency around their experience working with photographic collections, in the museum setting and online (Belknap et al. 2024).

During the Covid-19 pandemic, when the UK government-imposed restrictions limiting access to physical collections, there was a strategic drive across CHIs to produce online content that could engage diverse audiences in museum collections, support digitisation of collections and provide opportunities for digital volunteering. Zooniverse platform leads reported that CHI staff were increasingly requesting tools that could enable communities to come into digital contact with the institutions they could no longer visit. There was also a desire within Zooniverse to proactively address concerns about the quality of engagement and dialogical interaction enabled by the platform such as critique that citizen participation was limited to the completion of transactional tasks (Woodcock et al., 2017). We developed *Communities & Crowds* to explore whether new hybrid digitisation techniques that combined in-person, volunteer-led research using material collections and online crowdsourcing, could bring both types of citizen-researcher into a project's decision-making and development process. The Zooniverse team also aimed to work with the volunteer-researchers to redevelop the functionality of their 'Talk' feature (the platform's object-orientated discussion forum) and explore how this might support discourse between the digital and in-person volunteers.

We recruited a small team of local volunteer-researchers, the majority of whom are members of Bradford's African-Caribbean community. This group selected archival materials from the Daily Herald Archive (DHA) — a collection of over three million photographs held at the NSMM — that they decided were important to digitise. This resulted in a curated selection of photographs and documents relating to pre- and post-Windrush era, African-Caribbean histories.

Volunteer-researcher participation with *Communities & Crowds* took place in-person and online. In-person work involved inventorying selected archival materials, using a bespoke application created specifically for the project and digitising photographs and documents using a flatbed scanner. Online participation was carefully integrated with the in-person work and began with familiarising volunteer-researchers with Zooniverse. We held workshops to explore the potential of crowdsourcing in relation to the goals and interests of the volunteer-

researchers, particularly with regards to expanding accessibility and engagement with the selected archival materials. These sessions provided the information and tools for volunteer-researchers to design their crowdsourcing project, which they named *How Did We Get Here?* to emphasise the recurring themes of migration and obscured histories of African-Caribbeans within and outside of the United Kingdom. The volunteer-researchers led the process of writing copy and held the final decision-making power for the design and development decisions. The technical project building process was carried out by other project team members via the Zooniverse Project Builder, a free, browser-based tool that allows anyone with a dataset to build their own online crowdsourcing project and publicise it to the Zooniverse community of more than 2.8 million registered volunteers.¹

How Did We Get Here? launched on 25th July 2023 with a total of 410 photographs and documents from the DHA to be transcribed and categorised by online volunteers. Due to the relatively small size of the dataset, compared to other Zooniverse projects, we opted for a soft launch, adopting a grassroots, word-of-mouth approach to publicise the project. The project was quickly picked up by 211 online volunteers, who completed the transcription and categorisation work within a single week. We will draw out how this small data set and the speed *How Did We Get Here?* was completed, impacted on achieving our aims, later in the article.

Using Action Research Approaches in the Co-Creation of Hybrid Museum Experiences

Since the late 2000s, museum professionals and academic researchers have been experimenting with using PAR methodologies in CHIs to change the ways constituents engage with collections and programmes and bring about wider social or organisational change (e.g. Whyte 1991; Reason and Bradbury 2008). PAR centres the value of experiential knowledge for understanding an issue or problem, bringing together participant-researchers and practitioner-researchers to form a 'community of researchers' (Cahill 2007, p.299) who explore an issue through making or doing something together. In museum practice this has typically involved using exhibit development to work through an issue or question relevant to that community. Anna Rastas, for example, developed a PAR project with The Finnish Labour Museum and members of the African Diaspora communities in Finland to explore perceptions of 'Finnishness' through an exhibit built upon the knowledge and experiences of people of African descent (Rastas 2020).

PAR work in museums has also been geared towards improving inclusivity in relation to children and young people (Tzibazi 2013, Ampartzaki et al. 2013, Crabbe et al. 2022). Despite the potential for inclusive practice offered by digital volunteering, there is a notable absence in the theoretical literature of PAR approaches being applied to the development of digital, online or hybrid museum outputs. One notable exception is the *GIFT* project (Waern et al. 2022), which experimented with action research in European institutions to test new experiences and to develop a 'Community of Practice' around hybrid museums. *Communities & Crowds* builds on this work by offering new insights on utilising a PAR approach to co-create an online crowdsourcing project with in-person volunteer-researchers.²

PAR and online crowdsourcing projects have a shared concern with challenging the idea that legitimate knowledge is produced by experts. When we sought to combine these approaches, however, it was important to recognise that they developed from distinct rationales. Online crowdsourcing is rooted in a belief that members of the public can contribute legitimate knowledge to research. The central logic of Zooniverse crowdsourcing is that participants should not need expert knowledge to contribute, as aggregating data produces the most accurate results. The primary objective is to produce high-quality, consensus data that will contribute to the pre-defined aims of the researchers leading the project. The experience of participation, contribution to creating public datasets and new knowledge is considered as the primary benefit to participants. Practitioners of PAR, conversely, emphasise the value of an individual's lived, tacit and embodied knowledge-experience and seek to engage them actively in the formulation and development of the inquiry. PAR aims to bring about social change through bottom-up interventions and collective critical reflection for the primary benefit

of participants (Tzibazi 2013). More recently, crowdsourcing practitioners in CHIs have begun to draw on these participatory approaches in recognition that meaningful contributions could be made by drawing more on the particular, specific and lived knowledge-experience that individuals can bring (Ridge et al. 2021). *Communities & Crowds* sought to develop this work further by testing whether using PAR approaches to support the co-creation of an online crowdsourcing project can better serve the aims of volunteer-researchers and build effectively upon their unique knowledge-experience.

PAR practitioners frequently cite the creation of tailored spaces for talk and critical reflection as fundamental to positive participatory action involving community participant-researchers and CHI staff. Tzibazi (2013), for example, identified the critical importance of creating a safe space with regular time for conversation between participants and museum staff when working with young people. For Tzibazi this was essential in order to build the culture of systematic reflection and ownership of the research process that is necessary to develop a 'community of research'. The *GIFT* team highlight how the lack of mechanisms for internal critical discussion and reflection in museums can be problematic, especially when wrangling the complexities of hybrid experiences (Waern et al. 2022). Bernadette Lynch, likewise, suggests that a lack of space for open dialogue about community engagement was the biggest barrier to effective practice in CHIs and advocates for bespoke spaces for reflexive practice (Lynch 2010).

We designed *Communities & Crowds* to build upon the systemic action research (SAR) approaches and co-creation methodologies of the *Bradford's National Museum* (BNM) project (University of Leeds, NSMM, 2017-2021) which aimed to create pathways to improve the relationship between a national museum and its local context.³ During the BNM project, facilitators Helen Graham, Lynn Wray and Julia Ankenbrand used the co-creation of an exhibition *Above the Noise* (National Science and Media Museum, 15 March – 19 June 2019) and a permanent gallery installation (entitled *The Belle Vue Studio*) to explore how the museum could become locally rooted, open, engaged and collaborative. Being actively involved in *BNM* reinforced in our team the importance of creating safe spaces for dialogue in the development of co-created output. Indeed, *Communities & Crowds* was strategically designed to expand the process of organisational change that BNM began by experimenting with new workflows, processes, caring practices and technological solutions that could enable local volunteers to be more involved in more of the process of development of an online crowdsourcing project.

For *Communities & Crowds* we created different forums for conversation and reflective practice that were tailored to the needs of online and in-person volunteer-researchers, recognised the imbalances between volunteer-researchers and staff and took account of the potentially traumatic content within the archive. Purposefully, creating spaces to talk, was not only a means of moving the research cycles forward, but was one of the end goals of the action research experiments. The challenges posed by *Communities & Crowds* we considered were: 1) how to offer online participants a safe and open space for critical reflection and discussion on their research practice; and 2) how to build a community of research that incorporated both in-person and online volunteer communities.

Development of a 'Community of Research' Through Relational Networks

Practitioners of PAR (Bradbury-Huang 2012) have stressed the benefits of building a 'community of research' through existing relational networks. Gustavesen (2003, a and b) argues that action research projects should support the specific interests or aims of existing social networks, and these networks will in turn amplify and extend the reach of research findings. The BNM project demonstrated how this approach can work in practice for the mutual benefit of professional and community researchers. By going out into Bradford and talking with as many people as possible, *BNM* cultivated a large and ever-growing relational network of citizens interested in the museum and its core subject of media technology. The development of this network built the trust that resulted in over 108 community collaborators choosing to work with the *Above the Noise* project and their collective interests defined the scope and stories in the exhibition.

The recruitment phase of *Communities & Crowds* took place in Spring/Summer 2021 whilst Covid-19 restrictions remained in place, the vaccination programme was in process, and social mixing was still discouraged. Due to the heightened risk of working in a poorly-ventilated space, the NSMM archive was restricted to a maximum of six people, and social distancing and mask wearing were compulsory. In this atmosphere of personal risk and uncertainty it was important that potential recruits already had trust in the NSMM. The limitations to the number of people we could recruit to work in the archive also necessitated the careful consideration of who might particularly benefit from collaborating online with internationally dispersed communities. We recognised that for *Communities & Crowds* the selection, inventorying and digitisation phase offered the opportunity for diaspora communities to explore their heritage through working with archival photographs and use their experiential and tacit knowledge to improve institutional and local knowledge about the DHA. Huang and Liem (2022) suggest that museums must ensure that diaspora communities are not simply audiences but co-interpreters whose lived experience can reshape institutional knowledge. Our project highlights the potential for diaspora networks to be positioned not only as beneficiaries but as research collaborators in hybrid models of participation.

Following BNMs relational network approach, we reached out through the networks of primarily diaspora communities that had already been established as part of *BNM*. We contacted groups we knew to be interested in diaspora heritage, such as MOBE (Marshfield, Odsal and Bankfoot Enterprise), to ask them to share the opportunity, and posted an open call, and a blog with further information about the project to the museum website.⁴ In our call out we stressed that participants would be free to determine which part of the Daily Herald Archive they investigated:

Are you interested in discovering untold stories in our archive collections about the issues and histories that you think are important right now?... As a Volunteer Collections Researcher, you'll have the opportunity to choose which parts of the archive we should digitise and make available to the online community. You will help us to work out what questions we should be asking about these photographs and how they might best be documented and presented to capture the insight of people they are significant to.⁵

The call made clear that we were interested in experiential knowledge and how this might direct new avenues of exploration in the archive and priorities for digitisation.

We established our team from the outset as a 'Community of Research'—a group of volunteer and practitioner-researchers with different but equally valuable knowledge and experience that could come together in a collective inquiry aimed at making visible hidden histories. This positioning proved important, as our potential recruits were more motivated by the process of collective learning and sharing than the technical aspects of digitisation and archiving. One potential volunteer-researcher explained that:

I'm not interested in digitising it for his (sic) own sake, it's just it needs to be done. Mm-hmm it's like a necessary step to get to kind of where you want to go. Yeah, it has to be done so that other people can see it. (SMG, 2021, 1).

As this quote suggests, for our volunteer-researchers, the digitisation process was a necessary means to achieve their research goal of making images important to their local and international diaspora community more discoverable and accessible. It was our hope that the digital component of this work would support that goal by broadening the potential audience for these images from local groups to a worldwide audience.

Respondents to the 'Open Call' were invited to an introductory session where they could find out more about *Communities & Crowds*, see the archive, converse with other participants and identify shared interests. This session provided a dialogical space to build trust, establish if there were topics they might want to explore together in the archive and detail practicalities like how to mitigate Covid-19 risks. In this first session, three volunteers who had a shared interest in African-Caribbean heritage, history and racial politics (Maureen Rowe, Lincoln Anderson and Sandra Rowe) and Rebecca Smith, who had a specific interest in the DHA, committed to joining the project as volunteer-researchers.

Using the relational network approach enabled us to quickly recruit and retain a committed group of volunteer-researchers to the team, as well as deepen other networks. For example, our conversations with MOBE surfaced shared interests between the volunteer-researchers and other local constituents in developing a forum for African-Caribbean heritage, which led to the formation of the Bradford African-Caribbean Heritage Network (BACHN). Together with Gin Jacobucci, NSMM's volunteer manager, we were able to develop the network and host initial meetings. BACHN provided a conversation space, developed by the volunteer-researchers and their expanded networks, for the sharing of early research findings and instigating discussion about local community engagement ideas with a broader network of stakeholders.

Supporting the development of BACHN was in keeping with the core SAR principles of 'going where the energy is' and enabling new directions and actions to develop in parallel to the central research agenda. SAR adds an improvisatory approach to the usual action research cycles, which encourages being responsive to participants' passions and being open to new opportunities (Graham et al. 2020). Rather than seeking consensus, the principle of 'parallel development' suggests that researcher-participants are supported to lead their development in parallel with the central research process. We also applied this principle later on in *Communities & Crowds* when volunteer-researchers highlighted that they wanted to ensure that the local African-Caribbean community had an awareness of, and access to, the original photographs they had uncovered in the DHA. We supported them to develop and facilitate an open day for Black History Month where they showcased a curated selection of photographs and explained the purpose of the project.

Creating Spaces for Dialogue and Reflection in the Digitisation Phase

Previous research projects in museums have demonstrated the value of utilising archival photographs to prompt conversation and critical reflection on traumatic, difficult or sensitive events or subject matter. Archival photographs can offer both proximity and a critical distance whereby people are able to reflect on distressing or traumatic events including racial violence and war (Azoulay 2012; Parry et al. 2024). Our volunteer-researchers had a shared interest in African-Caribbean heritage, the experience of migrants and black people in Britain, racial and social inequality and the history and politics of Caribbean countries. Selecting, handling and digitising photographs from the DHA offered an opportunity to open up meaningful conversation about the lived experiences of the African-Caribbean diaspora in Britain, in the archive space and beyond. However, we knew that the archive folders volunteer-researchers chose to explore would likely contain distressing and potentially traumatic imagery and racist and offensive language. It was imperative to proceed with care and have concrete tools and processes in place to address the potential impact of working intensively with these photographic collections.

The Black, African and Asian Therapy Network (BAATN) facilitated a discussion with project staff about how to create a safe and supportive environment and mitigate any potentially traumatic or stressful experiences for our volunteer-researchers in the DHA.⁶ A key outcome of this session was better understanding the importance of conversation and collective critical reflection in processing distressing, offensive or potentially traumatic content. BAATN stressed the importance of allowing time at the beginning of each session to reflect on readiness to participate and at the end of each session to reflect critically on, and process, what had been encountered before returning to the business and busyness of everyday life.

Wray developed a session plan that incorporated these recommendations. At the start of each session, we invited volunteer-researchers to reflect on how they were feeling that day and to consider whether they were in the right place to proceed. If they decided not to continue with their pre-selected folders, we chose alternatives. This process functioned well and volunteer-researchers did, on occasion, decide to work with different material (Wray 2022).⁷ At the end of each digitisation session, we relocated to the museum cafe for refreshments, reflected on the material we had encountered and selected the folders for the next session. The interviews we conducted with our volunteer-researchers suggest that our approach provided a supportive environment and structure for everyone to make their own

decisions about readiness to encounter distressing or offensive content. Volunteer-researchers highlighted how the knowledge they could take a break or switch material, made them feel particularly supported and equipped to process challenging content (SMG 2021).

Session Plan – Volunteer Researchers (Wellbeing)

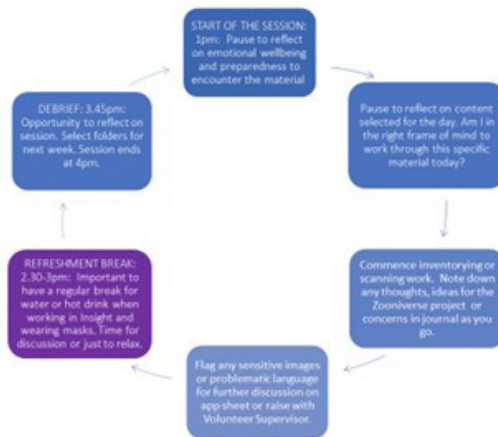


Figure 1. Session Plan developed following recommendations from BAATN. Diagram by Lynn Wray.

Beyond the mitigation of risk, our project also offered the opportunity to explore how to improve archival practice in relation to racist and offensive content with BAATN and our volunteer-researchers. This remains an evolving discourse in CHIs and there was no set protocol at NSMM. BAATN highlighted the value of the archive as a safe space for conversation between those with lived experience of racism, interest in racial and social justice and museum practitioners. The specific spatial and social context of the archive, and the research project, can change the impact of offensive words and images and our ability to work with them e.g. offensive terms can be processed as part of analytical or reflective dialogue very differently from when they are received with racist intent or force.

We sought to find the right balance between enabling volunteer-researchers to be proactively involved in decision-making about racist content and sensitive imagery and ensuring we were not placing the burden of responsibility onto a small group of unpaid individuals. It was crucial that volunteer-researchers understood their views were not assumed to stand in for their whole community and that the institution still held the accountability. We found it productive to frame the conversation around how other groups, e.g. young members of the African-Caribbean diaspora community, might respond to us replicating distressing images or racist language through our archival practice. Our group reflected that it would be important for younger people to understand the historical language used, even in relatively 'progressive' newspapers like the Daily Herald. This conversation helped us make a decision about how to label the new folders in which we were rehousing the archival photographs. We decided that we would copy the existing text on the photographs verbatim but place potentially offensive words such as 'coloured' in speech marks so it was clear that we were not ourselves utilising those terms, but rather recording its prior use.

To support this work, we developed two new spaces on our bespoke inventorying interface (a Google App Sheet) where volunteer-researchers could flag sensitive images or problematic language for further discussion. When an image was flagged, a new free-text space appeared for them to record why they thought an image was unsuitable for publishing or needed to be catalogued/edited/treated in a particular way. This acted as a further space

for critical reflection about problematic content. Interestingly, museum staff noted that volunteer-researchers tended to flag fewer photographs or language for review than they would have done themselves, but this in itself opened up a useful conversation about how our different exposures to racist language might lead to different levels of sensitivity. One volunteer-researcher, for example, reflected on how their own resilience to racist language and images of racial violence meant that they were well placed to do mediating work between the archive and communities of interest. They stated that:

I am not necessarily concerned at all to be honest. Because it's like, if you are watching a film and it has a specific certificate you would naturally expect some unpleasant scenes. And it is the same with archiving. There is the possibility that there might be some things that aren't nice to see, but you deal with it. (SMG 2021, 1).

The benefits of having the structures and spaces in place to support conversations about racist language and distressing images from the outset were reinforced when the volunteer-researchers adeptly considered and developed content warnings for online participants in their Zooniverse project.

Figure 2: Screenshot from the *Communities & Crowds App Sheet*. Developed by Lawrence Brooks, Science Museum Group.

Making Something Together

The digitisation process allowed for focused critical reflection, whilst the Zooniverse project provided a goal around which to orientate conversation and dictated the processes we used. One session out of each month was dedicated to developing the online crowdsourcing project so that we were relating weekly effort to our aspirations for the online participatory element of the work. This involved activities like testing out other Zooniverse projects so we could empathise with the perspective of an online volunteer and critically reflect on our experience in relation to our project, together.

It became clear during these conversations that developing the crowdsourcing project in relation to a 'research question' was not a helpful framing. For our volunteer-researchers, who were not working in an academic context, a more useful approach to developing a meaningful project was to discuss their personal aspirations for the photographs they had selected to digitise. Common to each person was a desire that these photographs would be more accessible, more visible and more discoverable to a wider group of people—in particular, to African-Caribbean diaspora communities wanting to explore their own histories. These early conversations gave us a motivation and goal to refer back to and a way of navigating

our direction through the archive and the digitisation process.

Early interviews with volunteer-researchers revealed that the three most central motivations for participating were: the opportunity to explore the archive and physically handle the photographs; learning new skills about the preservation and presentation of archival photographs; and the social experience of going on the journey together (SMG 2021). Therefore, we set up the processes of inventorying, rehousing and digitisation/scanning of photographs as paired activities to encourage conversation and ensured there were questions in the inventorying App Sheet that would prompt discussion and further research. We also recruited a pool of Volunteer Supervisors from the collections and curatorial teams at NSMM so that there would be an opportunity for conversation and knowledge exchange.

The interactions between our volunteer-researchers and project and museum staff during the inventorying process transformed the usually quiet archive into a lively, conversational space. The process of inventorying required an attentiveness to each and every photograph in the selected folder, and each pair tended to look through while reading out the captions or affixed newspaper articles pasted to the back of the photographs, inevitably leading to conversation and reflection within the group. The experience of exploring the archive and handling the photographs sparked personal reflections and memories. Though, we reflected that there would have been considerable benefits from capturing this knowledge more formally, both project and museum staff learnt much about the specific content of the archive and about Black British, local and Caribbean history and lived experiences of migration, racism and disability from conversations with the volunteer-researchers. It was this discursive element that the volunteer-researchers felt was most important to recreate in the digital realm for their Zooniverse project.

The process of digitisation using the flatbed scanner worked less well as a dialogical space for our particular group, who had limited experience of using digital technology. Though we simplified the process of digitisation, by creating a scanning and post-production workflow with the help of the professional photography team at SMG, it proved too technically complex for our volunteers to manage without close supervision. In our focus group session one volunteer researcher highlighted that time for conversation was limited because of the amount of focus the scanning involved:

You have to remember how to scan, you have to be on it, because it can't stay up here all the time. (SMG 2023, 2)

The mental effort of remembering the process (volunteer-researchers would usually go two or three weeks between scanning sessions) and the pressure of digitising to museum standard, meant that the conversation was less free-flowing and more focussed on the technical aspects than the content of the photographs.

This technical barrier is not unique to our project. As Navarrete et al. (2020) argue, digitisation projects often attempt to redistribute infrastructural costs to volunteers, which sometimes constrains participation and often threatens the long-term sustainability of the project when technical demands exceed available resources. We were clear from the outset that the volunteer labour (whether in-person or digital) in *Communities and Crowds* was not designed to replace professional skilled labour. The NSMM had already developed a pipeline for the professional digitisation of photographic collections as part of the development of stories about the Daily Herald for the Google Art & Culture platform (National Science and Media Museum). Rather, we sought to develop structures and workflows which could enable volunteer-researchers to be more involved in more aspects of the digitisation process so that they would have more agency across the project, and we could learn through the process of doing this work together. For our group of volunteer-researchers, in the specific spatial and social context of Covid, this workflow was less effective than inventorying as a participatory process. As volunteer-researchers were more adept at the inventorying process than the scanning process, it also created a backlog of photographs that had been inventoried but not scanned, which ultimately limited the amount of digital assets we had available at the launch of the online crowdsourcing project on the Zooniverse platform. As we will outline later, this also had repercussions for the opportunities for dialogical engagement between our in-person and online volunteer-researchers.

Co-creating the Zooniverse Project and Transitioning Online

It was challenging to maintain our volunteer-led approach in the digital phase due to the volunteer-researchers' collective lack of experience of online crowdsourcing efforts and confidence in their digital technology skills. Although enthusiastic, they expressed some apprehension at starting to work on something so unfamiliar. As one volunteer-researcher remarked:

I want to get my head around it. I guess I'm not very confident right now about it. (SMG 2023a)

Another volunteer-researcher expressed similar concerns:

I wouldn't go so far as to say it makes me anxious, but I think 'what if we get it wrong? Then people won't get the most out of it.' Rather than thinking, 'Yeah, but we're doing it so they'll make it what they will.' It's quite difficult not to feel that you need to get it right somehow. (SMG 2023a)

We therefore designed the working sessions for this transitional stage to enable the volunteer-researchers further time and space to become more familiar with the platform and confident in visualising their ideal project. We followed this by identifying elements that could be useful for the project they wanted to create. We then invited them to discuss their hopes for the digitised materials, and to consider how these ideas might be realised through enabling wider community participation. These imaginative sessions allowed the volunteer-researchers to identify a shared sense of optimism for the dialogue and engagement potential of Zooniverse, which aligned with their longstanding goal to increase access to the DHA.

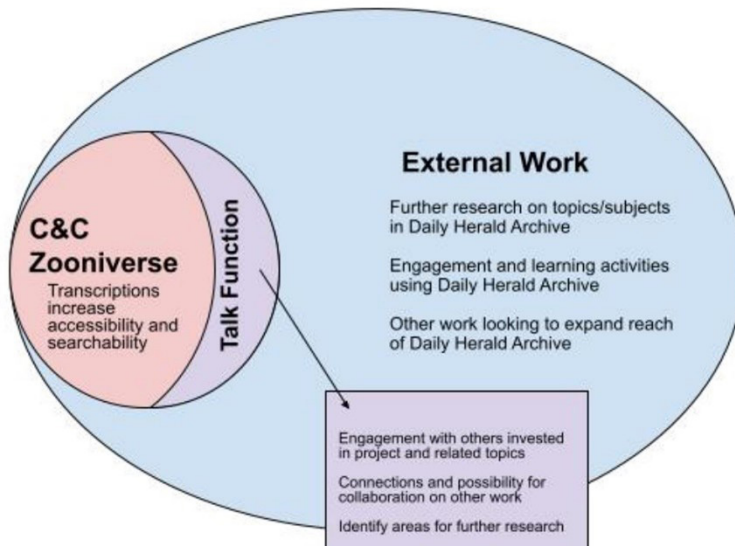


Figure 3: Diagram illustrating the intended impact of Zooniverse, created collaboratively through discussion sessions by Alex Fitzpatrick, Maureen Rowe, Sandra Rowe, LincolnAnderson, and Rebecca Smith.

Our next step was to use paper prototyping to create a hands-on experience simulating that of online volunteers. This helped the volunteer-researchers identify what workflows would be the most useful for meeting their aims and objectives, while still providing a meaningful experience for online volunteers. We presented them with a series of photographs digitised from the DHA

and asked them to act out workflow tasks that they had previously shown interest in, such as transcription and classification and collectively analysed our findings from this process.

In the final phase of Zooniverse development, we co-wrote the framing and instructional text. The volunteer-researchers had final approval of the project content, and placement student Jacob Fox assisted with inputting materials via the Project Builder interface. We started with the 'Introduction' and 'About' pages, asking the volunteer-researchers to describe the project in their own words and emphasising what they felt was most important to capture about the project goals. For the project Tutorial, we asked the volunteer-researchers to reflect on their own journey as part of *Communities & Crowds* and identify the advice that would have been useful for them when they first began to work with the DHA. We encouraged them to consider the knowledge that they had gained through their hands-on work in the archives that may not be accessible to online volunteers. This was particularly useful in creating content for the Field Guide, a Zooniverse feature that provides online volunteers with more detailed explanations of project content. The volunteer-researchers used the Field Guide to share examples of elements commonly found on the archival photographs, such as photograph agency stamps and edit marks, which they had identified as being particularly useful to them when they had done the original digitisation work.

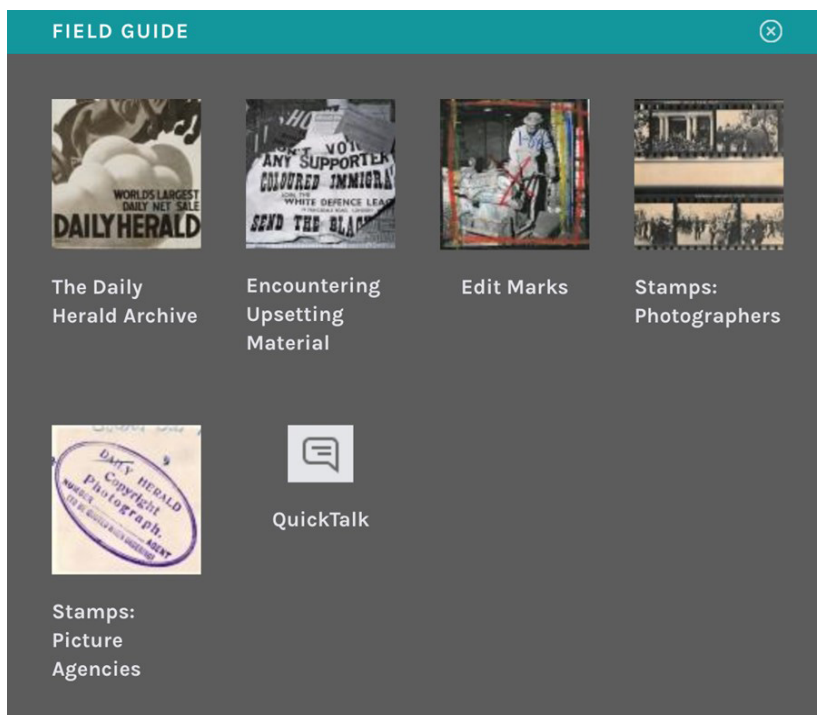


Figure 4: A screenshot of the Field Guide from *How Did We Get Here?* created collaboratively through discussion sessions by Maureen Rowe, Sandra Rowe, Lincoln Anderson, and Rebecca Smith.

The Field Guide also brought a full-circle moment, as it allowed the volunteer-researchers to return to their previous work on identifying sensitive content and problematic language. It became clear through our development sessions that we would need to refer back to our earlier discussions in order to appropriately signpost sensitive content for the online volunteers on Zooniverse. The volunteer-researchers collaborated to write content warnings, balancing the need for having explicit warnings while also holding to their belief that the importance

of including sensitive content and problematic language in the project was necessary as a testament to the realities of history. We complemented the content warnings with links to the resources used for the in-person volunteering sessions at the start of *Communities & Crowds* such as BAATN and the Vicarious Trauma Toolkit.⁸

Making Space to Talk on Zooniverse: QuickTalk and the Community Catalog

One of the central motivations of the volunteer-researchers participating in *Communities & Crowds* was the opportunity to work collaboratively with people from different backgrounds and experiences. The first survey of the volunteer-researchers conducted in December 2021 noted that most considered their participation as a social experience (SMG 2021). For the volunteer-researchers, Zooniverse offered the chance to extend their own personal engagement with the DHA and better understand the photos' relevance to the lived experiences of their wider local, translocal and diasporic networks. One of the volunteer-researchers, reflecting on their experience working with the DHA explained:

Yeah. I mean, it's [archiving and digitising the photographs] being engaged more with the world as opposed to archives being shut away and never being seen by anybody. A sense of allowing the wider community to see what you have in your archives. (SMG 2021)

The goal was to extend this experience of in-person archival work into the digital realm by bringing the volunteer-researchers into dialogue with Zooniverse volunteers. In order to facilitate this, we developed two new tools on the Zooniverse platform—QuickTalk and the Community Catalog—that created new opportunities for collaborative discourse to take place within the contexts of a digital crowdsourcing space. These innovations were intended to reinforce the proactive positioning of online volunteers as knowledge producers rather than extractive labour and thus connect to wider debates on digital labour. Agostino (2015), for example, warns that cultural heritage crowdsourcing often disguises unpaid work as playful engagement, while Irani (2015) highlights how volunteer contributions can become invisibilised forms of immaterial labour within institutional power structures. More recent work by Ridge et al. (2021) presents a framework arguing for 'human-centered projects that deliver benefits to all involved' and advocating for 'project design that includes the explicit definition of values in dialogue with project goals and objectives' (Chapter 4, 2021). Our project's experiments with the developments of new tools which integrated online volunteers into participatory action research frameworks initiated within a CHI institution, offered unique possibilities for better understanding how online volunteers can be engaged in a more meaningful, collaborative and visible discourse with staff and in-person volunteers. Both new features were in keeping with our project aims to better support CHI-led crowdsourcing efforts and their online volunteer communities.

QuickTalk

All Zooniverse projects come equipped with a built-in discussion forum, known as Talk. After classifying a piece of data, participants are given the option to either submit their work and continue, or to move to the project's Talk page, where they can comment directly on the image they have just classified, or read others' posts. This gives volunteers the unique opportunity to follow up their classification with additional information, pose questions for the research team, or incorporate hashtags to support enhanced discoverability.

The original Zooniverse approach to crowdsourced research is a scientific model that prioritises independent data classification, and the Talk forum is only accessible after a classification has been submitted in order to avoid bias. Recent work by the Zooniverse team to develop tools and support for CHIs (Van Hyning et al. 2017) have led to identification of best practices in specific tasks, most notably crowdsourced transcription. These efforts have shown that the independent data classification model is not always the most appropriate method for projects which focus on engagement with CHI collections or other cultural heritage materials. In some cases, allowing volunteers to collaborate actually produces higher-quality

results than individual classification (Blickhan et al. 2019). As dialogue was so central to *Communities & Crowds*, we chose to focus on exploring how to optimise the Talk forum to encourage earlier engagement with participants.

We created a custom adaptation to the Zooniverse Talk infrastructure, called QuickTalk, that allows volunteers to participate in a project's Talk forum while working on the classification task. A small 'comment' icon, with a numeric indicator displaying the number of active comments, ensured participants knew they had the option to choose the feature.



Figure 5: Two QuickTalk icons, one indicating that the image has no comments, and one indicating an image has three comments.

When a volunteer clicks on the QuickTalk icon, a dialogue box appears displaying the existing comments and providing a text entry field where they can contribute to the discussion.

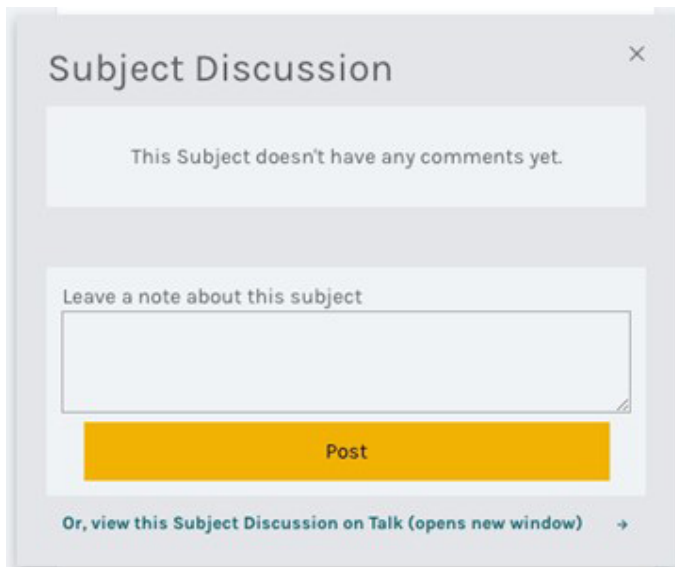


Figure 6: The QuickTalk dialogue box, as it appears when an image does not yet have any discussion comments.

The image below shows an actual QuickTalk comment thread from *How Did We Get Here?* with usernames redacted from each of the posts, written by three individuals. The first commenter has a question about whether participants should transcribe copyright stamps. The second shares additional context about the photograph being discussed, and the third is thanking the second for sharing that information about the image. This example demonstrates how this new feature allows volunteers to clarify questions about the task prior to completion. It also reveals how QuickTalk enables volunteers to more easily share their own knowledge about research subjects with the rest of the community.

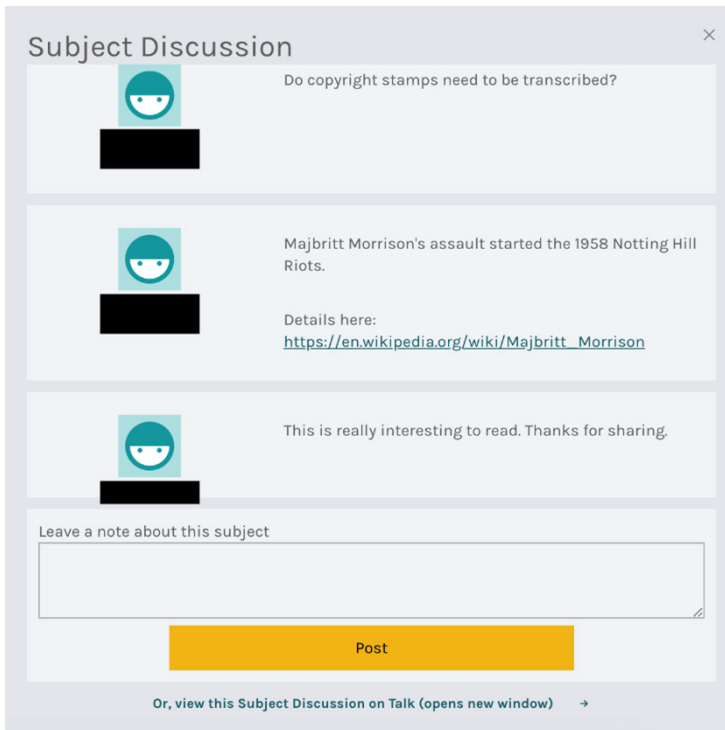


Figure 7: The QuickTalk dialogue box, as it appears with discussion comments (Zooniverse usernames redacted).

In *How Did We Get Here?* QuickTalk was primarily used to ask practical questions, share links to external information and discuss personal memories of the historical events depicted in the photographs. It provided a space for conversation between the volunteer-researchers who co-created the project and the online volunteers on Zooniverse. The emerging dialogue enabled the team to get feedback from online participants on the instructions and guidance, and to see how online volunteers were engaging and responding to the curated photographs.

The scale of our data set – the limited number of digitised photographs we had available for classification – impacted on the opportunities for the in-person and online volunteers to build a sustained dialogue using the QuickTalk feature. The speed with which *How Did We Get Here?* was completed (all 400 images were fully classified in a single week) meant that opportunities for conversation between in person and online volunteer-researchers were limited to that timeframe. The rapid exhaustion of our small dataset meant that the dialogical aims of the project were only partially realised. In our evaluation of the project we noted that for this feature to function more effectively as a sustained dialogical space we needed to have a larger dataset for volunteer-researchers to work with. One option would have been to invest more professional labour in the digital reproduction of the photographs and focus the volunteer-researcher labour on inventorying, transcription and classification. Moreover, as Oomen and Aroyo (2011) note, sustaining engagement requires more than task completion: online volunteers need ongoing pathways for continued dialogue and reflection and the absence of this in *Communities & Crowds* meant that conversation in the digital space did not continue beyond the completion of the tasks.

While the online experience was not as robust for the volunteer-researchers as anticipated, an alternative pathway for dialogue and reflection presented itself through the opportunity for the work of the volunteer-researchers to be represented as part of a new permanent gallery at NSMM, opened in July 2025. The ‘Sound and Vision’ galleries, which

highlight the integrated histories of photography, film, television and sound technologies included a section focused on ‘identity’. Within this section, a series of the DHA photographs digitised by the volunteers were reproduced on a wall with text describing the work of the four volunteers to bring these images to light. This was developed in a collaboration with the volunteer-researchers and NSMM curatorial team. The volunteer-researchers also had their portraits reproduced and displayed beside the DHA images to reflect their collaborative authorship of this section. While this was not a planned outcome of the volunteer project at Bradford, it became a platform for the work of the volunteer-researchers to be represented within the museum, and for this relationship to be maintained following the completion of the *Communities & Crowds*.



Figure 8: Photograph of the new ‘Sound and Vision’ galleries at the National Science and Media Museum, Bradford, 2025. Image appears courtesy of Science Museum Group.

However, it’s important to consider that not all volunteers, whether online or in-person, want, or are able to commit, to sustained or lengthy engagement (whether in person or online) and often part of the attraction of platforms like Zooniverse is the agency for volunteers to define their own level of engagement. A further learning from our project, that could be built upon in future research, is that it is important to consider whether a sustained dialogue is desired by volunteers and how this could be facilitated through the online project during the development of hybrid crowdsourcing projects.

The experiment enabled the Zooniverse development team to understand the potential of the QuickTalk feature for CHIs looking to increase engagement with their archival collections and to provide a mechanism for in person and digital volunteers to connect through the digitisation of archival objects. As of writing, this feature is now available to any Zooniverse Project Builder should they choose to activate it in their project; since *Communities & Crowds*, half a dozen teams have already enabled this feature. As with any collaborative feature, there

is a risk of introducing bias if other volunteers share information that is incorrect, but this risk is highly dependent on the type of task and research aims of the project, and the level of moderation provided.

The Community Catalog

During the process of creating and developing *How Did We Get Here?* volunteer-researchers used the crowdsourcing workflow and its tasks as a way of inviting online volunteers into the experience of archival exploration. To provide additional pathways for online participants to explore the photographs, we developed a new feature for interacting with Zooniverse project data, called the Community Catalog.⁹ We undertook this work in keeping with the PAR principles identified earlier in this article, particularly around involving volunteer participants in the research design process, valuing experiential knowledge, building relational networks, and creating safe and supportive spaces for dialogue and critical reflection.


We built on recent Zooniverse Digital Humanities infrastructure that subverts the ways the platform allows volunteers to access project data. Historically, Zooniverse delivered project images at random, another feature designed for avoiding bias. For cultural heritage materials, however, there is often a need to understand the context of an image. For example, sequential classification, in which images are delivered to participants in a specific order, is useful for transcribing sequential pages of text, like diaries or letters. Other efforts have included the creation of an index page for projects which exposes institutional metadata fields in order to allow participants to choose what they want to work on (Blickhan 2021). The technical infrastructure that existed for the index provided a significant framework for the Community Catalog.

The main issue we wanted to address is that, while surfacing metadata can be a force for giving more agency to online participants in crowdsourcing projects, it is limited to metadata created by holding institutions. The ethos of *Communities & Crowds* led us to ask what such a resource might look like if it included participant-created metadata as well. The final product is a data exploration app, connected to a Zooniverse project. It allows users to search and explore a project's data based on institutional metadata as well as participant-generated hashtags. It includes access to Talk threads for an image, as well as a direct link to classify that image on the Zooniverse project. Essentially, it aggregates all community posts and subject information on a single page.

The above image shows a subject image from *How Did We Get Here?* in the Community Catalog interface, including Subject Discussion threads. The first comment in these threads shows that the #demonstrations tag has been added to the image. In the second comment, a volunteer has shared a link to a news article with additional information about the events displayed in the image.¹⁰ The title of the DHA folder that the image is filed in demonstrates the system implemented by the volunteer-researchers during the digitisation process, using quotation marks to distinguish outdated, offensive, and/or racist text in the institutional metadata—in this case, the use of the term 'Coloured People'.

Tools like QuickTalk and the Community Catalog also function as a place for participants to contest institutional labelling or point out mistakes. In one example from *How Did We Get Here?*, a participant used these features to note that an image depicting a racist anti-immigration sign in support of the White Defence League was not marked in the institutional metadata as containing sensitive or problematic language. Elsewhere, a participant noted that an image of a peaceful protest had been erroneously given the institutional label of 'riot'.

"Coloured People" in Britain | Riots and Demonstrations (Including Notting Hill 1958) | Folder 1



Subject Discussion

#demonstrations

8/78/2021, 2:45:00 PM

Information about this march can be found here:

<https://www.theguardian.com/uk/77>

4/24/2020, 7:33:44 AM

View this Subject Discussion on Talk

INSTITUTIONAL METADATA:

item PHOTOGRAPH

notes

folder "Coloured People" in Britain | Riots and Demonstrations (Including Notting Hill 1958) | Folder 1

image1 SMG00443770_(0001).jpeg

image2 SMG00443770_(0002).jpeg

group_id test1

oversize FALSE

condition 1 - Good

internal_id SMG00443770

part_number 94561

photographer

picture_agency Sun (1964-1969)

sensitive_image FALSE

problematic_language FALSE

sensitive_image_note

problematic_language_notes

COMMUNITY TAGS:

#demonstrations

ADD TO COLLECTION

CLASSIFY THIS SUBJECT

ADD TO FAVORITES

SHARE

Figure 9: A subject image from *How Did We Get Here?* in the Community Catalog.

QuickTalk and the Community Catalog demonstrate how the design of digital communication spaces can impact not only the flow and volume of information shared, but also the content. Knowing that others will have immediate access to a post, or that it has the potential to aid or impact another person's participation in that project, can change how a communicative tool is used. As part of the *Communities & Crowds* project we adapted the learning from the experience at NSMM to develop a new volunteer-led digitisation and crowdsourcing project at National Museums Scotland, which resulted in the *Stereovision* project (still live at the time of writing).¹¹ Having similarly implemented the Community Catalogue and Quick Talk functions on *Stereovision*, we will be interested to see if the online community uses these tools in a similar way or if the project's content impacts how these tools are used.

Conclusion

Throughout the lifecycle of *Communities & Crowds*, our guiding ethos was 'making space to talk' in every aspect of the work. As Arantes (2025) argues, digitisation and algorithmic infrastructures are never neutral but bound up with contested curatorial and political choices. Embedding spaces for critical reflection on archival, digital and institutional practices, including about balances of power, colonial legacies, labour, and sustainability, into hybrid participatory models is essential if such projects are to contribute to more equitable futures for cultural heritage.

In this article we have demonstrated how a hybrid approach to people-powered

research might be used to create opportunities for volunteer participants at the design and development stage of online crowdsourcing projects, broaden and deepen engagement with collection objects, increase the discoverability of archival objects important to both local and international communities, and to develop richer, better-informed interpretation materials. We have argued that the collaborative framework we developed through combining our experiences in participatory museum and crowdsourcing methods, effectively harnessed the power of conversation and made space for critical reflective practice. This space for conversation enabled our volunteer researchers to bring their own unique knowledge-experience into the successful creation of an online crowdsourcing project on the Zooniverse platform.

Communities & Crowds also offered a glimpse of how online participation can become more meaningful when linked to dialogical practices and opportunities for knowledge-sharing. By developing QuickTalk and the Community Catalog, the project surfaced how digital volunteers might be repositioned more convincingly as co-creators of knowledge rather than extractive contributors. Yet, as scholarship on digital labour reminds us (Irani 2015; Ridge et al. 2021), these practices remain embedded in broader questions of institutional power and sustainability. Whilst the project clearly demonstrated the value of using a participatory action research framework to meaningfully engage in-person volunteers in both the development of online crowdsourcing projects and research into photographic collections in CHI settings, the hybrid model also exposed structural challenges around digital labour, sustainability, and the limited agency of online contributors. The digitisation bottleneck, created by the technical and resource-intensive nature of flatbed scanning, meant that the project was unable to generate a sufficiently large dataset to test whether our approach affected dialogue between online and in-person volunteers. This highlights how infrastructural and technical barriers shape the scope of participatory work as much as methodological design. Our experimentation revealed both the potential and the need for further exploration into how an online 'Talk' space might be used to bring internationally dispersed, digital volunteer-researchers together with local in-person volunteers to co-create projects.

Finally, the project demonstrated strong potential for diaspora engagement. In-person volunteers understood digitisation less as an end in itself and more as a route to reconnect communities with their heritage. Beel et al. demonstrated a form of this framework, specifically looking at opportunities for digital methods to be used by rural heritage volunteer groups 'as a potential opportunity for accessing and building dialogue with diaspora, as well as with many within the existing local community' (2015, 7). While they note the risk of digital methods in these scenarios potentially leading to a loss of agency from local volunteers, they recognize that putting strong methodological and partnership frameworks in place can help to mitigate risk, and the positive outcomes, especially for groups e.g. interested in genealogy outweigh the negatives (Beel et al. 2017, 8). Future participatory projects could therefore focus on exploring how hybrid volunteering could enable translocal diaspora networks to work together as dispersed but connected research collaborators and explore the development of bespoke dialogical spaces. This points towards a more sustainable and ethically grounded model of hybrid museum participation—one that recognises the limits of volunteer labour while amplifying the transformative potential of dialogical spaces across digital and physical domains.

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Author Contributions

GB and SB conceived of the original project idea; LW and GB led the development of the Participatory Action Research approach, the research design for volunteer experience and the recruitment and onboarding of volunteers, selection and digitisation of archival material components of the project; SB, GB and LW designed and ran introductory sessions to Zooniverse and the early co-creation planning sessions; AF led the work with volunteers in designing and building the Zooniverse project, with assistance from SB; SB led the technical development of new Zooniverse tools; LW led the NSMM volunteer supervisor team.

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