

Participation and Inclusion with Digital National Collections: Co-Designing the Sloane Lab

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1. Introduction

The Sloane Lab: Looking Back to Build Shared Collections is a three-year discovery project (2021–2024) of the Towards a National Collection program (TaNC), a major investment by the Arts and Humanities Research Council (AHRC) using digital technology to create a unified national collection of the galleries, libraries, archives, and museums in the United Kingdom and open U.K. heritage to the world.¹

The Sloane Lab seeks to explore the potential and challenges of employing advanced computational technologies to unite the historical and present-day digital records of Sir Hans Sloane (1660–1753), a British physician, naturalist, and collector. The Sloane Collection was assembled by Sir Hans Sloane from around 1680. After his death in 1753, the collection was bought by the state on behalf of the nation and moved to a new institution, the British Museum, which was created for the purpose of making accessible to the public the vast number of objects he accumulated during his long life.² These were described by Sloane and his assistants across more than forty original manuscript catalogues (Sloane Lab 2022). The aim of the project is to employ advanced computational and digital-humanities approaches augmented by a participatory co-design methodology to reunite the collection records online for the first time and enrich debates on issues such as “imperialism, colonialism, slavery, loss, and destruction that have shaped the UK’s national collections until now” (Ibid.).

Multiple challenges face anyone seeking to access and use the collections across the different institutions where the objects were eventually distrib-

¹ For more information on Towards a National Collection program, visit <https://www.nationalcollection.org.uk/about>.

² For more information on Hans Sloane’s collections, visit <https://sloanelab.org/sloane-collections/>.

uted, namely, the Natural History Museum (NHM), the British Library (BL), and the British Museum (BM), each holding different parts of the original Sloane Collection. Notably, these challenges are not limited to the dispersal of the collection. They also relate to the objects' documentation and provenance (Ortolja-Baird et al. 2019), attribution (Ortolja-Baird and Nyhan 2022) and more generally to the contested nature of the origins of the collection. As confirmed by historical research (Delbourgo 2018), Sir Hans Sloane benefited from the profits extracted from transatlantic enslavement and established trading routes and companies (such as the East India Company and the Hudson Bay Company) for the acquisition of these objects, including gains from investments in private companies, such as the Royal African Company, and profits from his wife Elizabeth Rose's inherited plantations in Jamaica and associated forced labor of enslaved people (Ibid.).

Considering the contested nature of the collection, the unacknowledged role of "countless people across the globe" (Ibid., 202) in its acquisition, and the inclusive aims of the Sloane project, the process of co-designing Sloane's aggregated digital collection requires an acknowledgment of the complexity of the field. This not only relates to the use of technological frameworks such as integrative framework (IF), persistent identifiers (PIDs), and Linked Open Data (Sung 2009; Ridpath 2022; Padfield 2020; Winters et al. 2022; Kotarski et al. 2022), or legal constraints connected to restrictive copyright frameworks for digital reuse of museum collections (Wallace 2022). "Soft factors" such as trust in technology (e.g., Smyth et al. 2021), ethical policies, and incentives for participating in the production of a digital aggregator play an important role too.

2. The Interdisciplinary Field of Participatory Co-Design

To critically engage with this contested landscape, the project envisioned a participatory approach for the co-design of Sloane Lab that would be responsive to external and diverse contributions. The aim was to develop a system for participatory modelling that would lead to the co-creation of digital tools shaped around users' needs and aspirations – a requirement that emerged from foundational work for the project's Leverhulme Trust-funded precursor Enlightenment Architectures: Sir Hans Sloane's Catalogues of His Collections (Nyhan 2023). The approach also responded to a number of critical questions raised in the new case for support, among them: "How can digital technology help us tell new stories about what can be rediscovered, and reimagined, by linking collections? How

can we make specialist users and members of the public more aware of the contested nature and histories of museum collections?” (Nyhan et al. 2023). In response to the aspirations laid out in the new case for support, Terracciano, the participatory co-design consultant, recruited by the project to research, design, and deliver mechanisms of co-design and participation for Sloane Lab, produced a plan of action that reflected the complexities of the Sloane Lab co-design space and positioned it within an interdisciplinary field of research as a way of critically engaging with the issue of co-production in digital heritage.

The limited scope of this article does not allow a literature review of co-design digital methods. It may suffice to say that the participatory program built on the last three decades of activist work in black and Asian heritage (Hall 1999, Littler and Naidoo 2005, Terracciano 2018a) and benefited from the consultant’s interdisciplinary and intercultural approach to participation, including integration of theories and practices from third-paradigm feminist human-computer interaction and participatory design (Harrison, Sengers, and Tatar 2011; Bannon, Bardzell, and Bødker 2019), performing arts (Boal 2023; Adie, Okoro, and Orim 2014), community and critical heritage studies (Flinn and Sexton 2018; Hill 2018), participatory action research (Reason and Bradbury 2001; Blair 2010), and anthropology (Knowles and Cole 2008).

The field of mycorrhizal ecology (the symbiosis between fungi and trees) and forest networking (Heijden and Sanders 2003) also inspired the consultant’s design of the Sloane Lab participatory program, because it provided a comparative understanding of the complexities related to other-than-human interactions, their mutually beneficial relationship and ecological significance. Given the substantial number of botanical specimens included in the Sloane Collection and the nature of the project, ecological network theory and new understandings of diversity and spatial and temporal dynamics in mycorrhizal ecology and development (Heijden and Sanders 2003) offered an opportunity to open further ecological perspectives within the Sloane Lab technological space and on foundational research on migrant and diverse community heritage and its relation to mainstream cultural institutions (Terracciano 2018b). As a result, the Sloane Lab co-design program allowed the team to dig deeper in this interdisciplinary field, to use it to unearth the complexities entailed by the development of a TaNC project by exploring its ramifications in the techno-digital space of the museum-heritage aggregator.

3. *A Dialogical Practice of Participation*

In practical terms, the ideation process first required an understanding of the aims, objectives, and potential challenges of developing a system for participatory modeling in different but relatable scenarios. On the one hand, the project aimed to produce a participatory program geared toward theoretical research, and on the other to investigate co-creation for its potential to democratize the ways digital tools are created by shaping them around users' needs and aspirations. To reconcile these needs, three main aims were identified for activities with participants:

- Discover the kind of questions that “curious or interested” individuals (to use a paraphrase of an expression by Sloane) and communities may wish to ask of Sloane’s collections and, by extension, a “national collection.”
- Learn how to support individuals and diverse communities of interest in different ways to search, use, visualize and transform understandings of Sloane’s records.
- Explore the ways in which sustained participatory co-design and engagement by a community of practice can transform knowledge about unified collections, in this instance Sloane’s collections.

In light of the above, a series of challenges were then recognised and catered for. These included:

- Selecting, enriching, and releasing collections as data.
- Supporting all users, including academic, to ask new and innovative questions / areas of study of unified collections / catalogues
- Helping the public search collections for different uses from academic ones.
- Overcoming barriers caused by use of specialist language in the catalogues.
- Identifying and visualizing gaps in the collections and ethical grey areas.

The practice of dialogical co-creation implied a configuration of the project vocabulary toward co-design mechanisms conceived “with” or “by” members of the public rather than “to,” “about, or “for” them, with research participants occupying the role of “subjects” rather than objects of research (Igwe, Madichie, and Rugara 2022). The institutional partners were invited to partake in the planning process as “stakeholders” and

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contributors, matching their expertise with that of external collaborating organizations from the community-heritage sector as “gatekeepers” of critical knowledge and networks. A non-extractive model of anticolonial research practice was reflected in participants’ remuneration, possibility to withdraw from research at any time, approval of images and text before publication, and responsiveness to participants’ feedback in the design of activities. As a result, new questions, needs, and interests were discovered in the process of modelling the participatory co-design of digital environments with communities of interest and heritage professionals. Finally, as well as reflecting on the growing field of data ethics (Floridi and Taddeo 2016), issues related to racial and gender biases in the dataset and to data absences were taken on board during planning to promote collective reflexivity not only around the problematic origins of the collection but also around the studying and reuse of the data.

4. Preliminary Conclusions

The program delivered ten in-person and online digital activities, focus groups, workshops, demos, and testing sessions with an engagement of 172 participants across all the events.³ It was designed to be incremental, iterative, and circular so that learning from one activity could be passed into the following one, which helped reframing the practice of participatory co-design of digital environments across different communities of interest and heritage organizations and enhance the polyphonic quality of the program. To achieve this, participants’ data were gathered during the activities via online forms and discussions, totalling 1,783 responses to online forms and 19(.37) hours of transcripts of discussions. Data were then analyzed using both quantitative and qualitative tools for reporting to the technical team through categories cutting across all participatory activities.

As a result, the program allowed Sloane Lab to:

- Acquire knowledge on ways in which specialist and non-specialist users engage with the Sloane collections. Focus on *accessibility*: Use of alternative search terms and labels for plants.
- Learn about the need to develop a search facility that can better accommodate non-academic users, and constructively engage with barriers

³ This is the total of participants between October 2022 and March 2024.

created by specialist and racist language in the catalogues. Focus on *usability*: Increase access to collections to nonspecialist users and those with an interest in the contested nature of museum collections and historical events such as colonialism and the slave trade.

- Raise awareness about the Sloane collections among various types of users and produce new knowledge through activities. Focus on *interoperability*: Enhance links between internal and external datasets.

A number of other important themes also emerged from the analysis of the Sloane Lab participatory program. These will be the focus of forthcoming publications.

Works Cited

- Adie, Edward U., Lilian Okoro, and Eugenia Orim. 2014. Exploring the Potentials of Community Theatre as a Tool for Social Change: the Participatory Communication Method. https://www.researchgate.net/publication/370322773_Exploring_the_Potentials_of_Community_Theatre_as_a_Tool_for_Social_Change_the_Participatory_Communication_Method
- Bannon, Liam, Jeffrey Bardzell, and Susanne Bødker. 2019. "Reimagining Participatory Design." *Interactions* XXVI.1 (January – February): 26. <https://interactions.acm.org/archive/view/january-february-2019/reimagining-participatory-design#R8>.
- Blair, Adream. 2010. "Beyond Borders. Participatory Design Research and the Changing Role of Design." *Visible Language* 44, no. 2: 207-218. <https://journals.uc.edu/index.php/vl/article/view/5833>
- Boal, Julian. 2023. *Theatre of the Oppressed and its Times*. London: Routledge. <https://doi.org/10.4324/9781003325048>
- Delbourgo, James. 2018. *Collecting the World: The Life and Curiosity of Hans Sloane*. London: Allen Lane.
- Flinn, Andrew, and Anna Sexton. 2018. "Research on community heritage: Moving from collaborative research to participatory and co-designed research practice." In *A Museum Studies Approach to Heritage*, edited by Sheila Watson, Amy Jane Barnes, and Katy Bunning, 625-639. London/New York: Routledge.
- Floridi, Luciano, and Mariarosaria Taddeo. 2016. "What is data ethics?" *Philosophical Transactions of the Royal Society* 374, no. 2083. <https://doi.org/10.1098/rsta.2016.0360>.
- Hall, Stuart. 1999. "Un-settling "the heritage," re-imagining the post-nation. Whose heritage?" *Third Text* 13, no. 49: 3-13. <http://doi.org/10.1080/09528829908576818>.
- Harrison, Steve, Phoebe Sengers, and Deborah Tatar. 2011. "Making epistemologi-

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- cal trouble: Third-paradigm HCI as successor science.” *Interacting with Computers* 23, no. 5 (September): 385 – 392. <https://doi.org/10.1016/j.intcom.2011.03.005>.
- Heijden, Marcel G. A., and Ian R. Sanders, eds. 2003. *Mycorrhizal Ecology*. Heidelberg: Springer.
- Hill, Matthew J. 2018. “World heritage and the ontological turn: new materialities and the enactment of collective pasts.” *Anthropological Quarterly* 91, no. 4 (fall): 1179-1202. <https://doi.org/10.1353/anq.2018.0062>.
- Igwe, Paul Agu, Nnamdi O. Madichie, and David Gamariel Rugara. 2022. “Decolonising research approaches towards non-extractive research.” *Qualitative Market Research* 25, no. 4: 453-468. <https://doi.org/10.1108/QMR-11-2021-0135>.
- Knowles, J. Gary., and Cole, Ardra L., eds. 2008. *Handbook of the Arts in Qualitative Research: Perspectives, Methodologies, Examples, and Issues*. Thousand Oaks, California: SAGE Publications. <https://doi.org/10.4135/9781452226545>.
- Kotarski, Rachel, Jack Kirby, Frances Madden, Lorna Mitchell, Joseph Padfield, Roderic Page, Richard Palmer, and Matt Woodburn. 2022. *Persistent Identifiers as IRO Infrastructure: Towards a National Collection Foundation Project Final Report*. Zenodo. <https://doi.org/10.5281/ZENODO.6359926>.
- Littler, Jo, and Roshi Naidoo, eds. 2005. *The Politics of Heritage: The Legacies of Race*. London: Routledge.
- Nyhan, Julianne. 2023. “Project Round up. Enlightenment Architectures: Sir Hans Sloane’s Catalogues of His Collections (2016-19).” *Arche Logos* (blog). <https://doi.org/10.58079/bby2>.
- Nyhan, Julianne, Hanna James, Andreas Vlachidis, Andrew Flinn, Nina Pearlman, Mark Carine, and JD Hill. 2023. *The Sloane Lab: Looking back to build future shared collections*. <https://doi.org/10.5281/zenodo.7346794>.
- Ortolja-Baird, Alexandra, and Julianne Nyhan. 2022. “Encoding the haunting of an object catalogue: on the potential of digital technologies to perpetuate or subvert the silence and bias of the early-modern archive.” *Digital Scholarship in the Humanities* 37, no. 3. <https://doi.org/10.1093/llc/fqab065>.
- Ortolja-Baird, Alexandra, Victoria Pickering, Julianne Nyhan, Kim Sloan, and Martha Fleming. 2019. “Digital Humanities in the Memory Institution: The Challenges of Encoding Sir Hans Sloane’s Early Modern Catalogues of His Collections.” *Open Library of Humanities* 5, no. 1 (June 26): 44. <https://doi.org/10.16995/olh.409>.
- Padfield, Joe, Charlotte Bolland, Neil Fitzgerald, Anne McLaughlin , and Glen Robson. 2020. *Practical Applications of IIF as a Building Block towards a Digital National Collection*. Interim Report Foundation Projects Towards A National Collection. <https://zenodo.org/records/6884885>.
- Reason, Peter, and Hilary Bradbury, eds. 2008. *The SAGE Handbook of Action Research*. Thousand Oaks, California: SAGE Publications. <https://doi.org/10.4135/9781848607934>.

- Ridpath, John. 2022. "Introducing IF's Responsible Technology by Design Framework." *Medium*. <https://medium.com/writing-by-if/introducing-ifs-responsible-technology-by-design-framework-cdb4146fcfc5>.
- Sloane Lab. 2022. <https://www.sloanelab.org>.
- Smyth, Hannah, Julianne Nyhan, and Andrew Flinn. 2021. "Opening the 'black box' of digital cultural heritage processes: feminist digital humanities and critical heritage studies." In *Routledge International Handbook of Research Methods in Digital Humanities*, edited by Kristen Schuster and Stuart Dunn, 295–308. London/New York: Routledge.
- Sung, S. Kim. 2009. "The Integrative Framework of Technology Use: An Extension and Test." *MIS Quarterly* 33, no.3 (September): 513–537. <https://doi.org/10.2307/20650307>.
- Terracciano, Alda. 2018a. "The Trading Faces Online Exhibition and its Strategies of Public Engagement." *HUMAN IT: Nordic Digital Humanities: Resources and Practices* 14, no. 2. <https://humanit.hb.se/article/view/599>.
- _____, 2018b. "Future Histories: An Activist Practice of Archiving," in *Popular Postcolonialisms: Discourses of Empire and Popular Culture*, edited by Atia Nadia and Houlden Kate. London: Routledge.
- Wallace, Andrea. 2022. *A Culture of Copyright: A Scoping Study on Open Access to Digital Cultural Heritage Collections in the UK*. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4323683.
- Winters, Jane, John Stack, Kalyan Dutia, Jamie Unwin, Rhiannon Lewis, Richard Palmer, and Angela Wolff. 2022. *Heritage Connector: A Towards a National Collection Foundation Project Final Report*. <https://zenodo.org/records/6022678>.