CURATOR
THE MUSEUM JOURNAL

ARTICLE

The W-ICAD model: Redefining museum access through the Workshop for Inclusive Co-created Audio Description

Alison F. Eardley[1] | **Vanessa E. Jones[2]** | **Lindsay Bywood[1]** |
Hannah Thompson[3] | **Deborah Husbands[1]**

[1]University of Westminster, London, UK

[2]Smithsonian National Portrait Gallery, Washington, DC, USA

[3]Royal Holloway, University of London, London, UK

Correspondence
Alison F. Eardley, Psychology, School of Social Sciences, 115 New Cavendish Street, London W1W 6UW, UK.
Email: a.eardley@westminster.ac.uk

Abstract

This research describes the development of the Workshop for Inclusive Co-created Audio Description (W-ICAD) model. Research from psychology and neuroscience explains why the assumption that vision is necessarily sufficient to be able to engage with collections is problematic, and why inclusive museum audio description (AD) (referred to as visual or verbal description in the United States) might begin to provide a solution to this problem. At the same time, the growing recognition of the need to diversify voices and narratives within the international museum sector demands a re-imagining of how museum AD is created, and who creates it. Underpinned by the axioms of Blindness Gain and created through an iterative action research process by a joint UK-US team of researchers and museum professionals, in collaboration with a broader team of co-creators, the W-ICAD model provides museums and the cultural sector with a tool for producing co-created AD, created by blind, partially blind and sighted individuals for use in museums by blind, partially blind or sighted audiences. The applications for this model are discussed.

INTRODUCTION

Author note: Within this article, we will be referring to people as blind or partially blind (BPB), as an explicit move away from the deficit model, which describes people based on a loss or restriction of sight (e.g., visually impaired/low vision).

The assumption of vision

Museums and galleries across the globe are based on the assumptions that most visitors have vision, and that their vision is largely sufficient to engage with collections (Chatterjee, 2008; Classen, 2005). Visual perceptual information (of an artwork or artifact) is generally enriched with visually presented text panels, and sometimes with a recorded audio guide. The content of an audio guide is typically driven by museum curators, providing information that reinforces and extends a visual text panel, to give listeners more background information and interpretation that will enrich their understanding. The implicit assumptions are that: (1) users of a standard audio guide have full visual access to the item being discussed; (2) through vision they can gain an understanding of the item; and (3) this understanding means that they do not need a descriptive audio guide to support their perceptual experience. There may also be other tactile, auditory or olfactory opportunities for engaging, but those are generally designed to support the primary visual experience.

Research on museum experience challenges this assumption that vision alone is sufficient to gain access to collections. It has shown that the majority of (sighted) visitors to exhibitions are "non-diligent" (Serrell, 1997), meaning they stop only transiently at individual exhibits, and visit an entire exhibition quickly (in an average of 20 min). This finding is supported by research showing that art museum visitors spend a median of around 20 s looking at individual works of art (Smith et al., 2017). Within memories about standard museum visits, information about individual artworks or objects is generally limited (Hutchinson, Loveday, & Eardley, 2020). These findings also only pertain to the approximately 50% of the population who visit museums and galleries (DCMS, 2020). As such, where people do take the time to visit museums and galleries, most often their engagement with objects within collections is rapid and is not retained over the long term.

The limitations of vision

Psychology and Neuroscience can help us to understand why the assumption that vision is necessary and sufficient is failing museum visitors. Basically, although we might be able to see the contents of a museum (sensation) it does not mean that we are paying attention to everything that we are sensing. Our brains are continuously bombarded by sensory information. But we are not capable of fully processing all the sensory information that we receive. Attention has been defined as the flexible control of limited resources (Lindsay, 2020). As such, our attentional system enables us to select certain information for more detailed processing, while other information is processed in a more limited way. Eye-tracking research looking at how people explore art has indicated that the majority of the gaze is focused on salient features, for example figures (in figurative art), or areas of high contrast (in abstract art) (Quiroga & Pedreira, 2011). Research has also shown that novices and experts view artworks differently: experts tending to take a more holistic approach to viewing artworks, whereas novices focus on salient features (Koide et al., 2015; Pihko et al., 2011). This is in line with research which has explored the things that can guide what we chose to pay attention to. The way in which attention is focused is often driven by what we want to achieve (task-driven), with practice or repetition playing a role. Essentially, people get better at understanding where they need to look to achieve the goal or task they have (Hayhoe & Ballard, 2005). In line with this, Nodine et al. (1993) found that novice art viewers were more likely to focus on individual objects within the foreground, and experts were more likely to look more broadly at the background. They argued that training encouraged the exploration of the relationships between objects. Walker et al. (2017) looked at the gaze patterns of adults and children. They argued that unlike children, adults are

more likely to alter their gaze pattern after hearing the audio guide. Thus, the research evidence from psychology and neuroscience strongly challenges the assumption that sighted museum visitors know how to focus their attention on museum collections. Taken together, this research suggests that the majority of museum visitors simply do not know how to look in a museum, and if they are given any guidance or additional information, they will adjust their looking patterns.

Audio description as guided looking

Although a standard audio guide provides some background information about an object or artwork, and may include some references to aspects of the object or artwork itself, it does not describe. Audio description (AD), also known as visual or verbal description in the United States, does provide description. AD has traditionally been understood as a translation of visual information into verbal information for the benefit of people who are blind or partially blind (Fryer, 2016; Snyder, 2020). However, it can equally be used to describe touch, smell or sounds, and can be made available in text form or through sign-language interpretation.

There is also a growing body of research that has explored whether or not AD support sighted audiences to get a deeper engagement with museum collections (e.g. Eardley et al., 2016). Research has shown that audio description is equally as enjoyable for blind and sighted audiences (Hutchinson & Eardley, 2023); equally as enjoyable compared to a standard audio guide for sighted audiences (Hutchinson & Eardley, 2021). This has been supported by the finding that AD can enhance memory for artworks for sighted listeners compared to a standard audio guide (Hutchinson & Eardley, 2021). The strength of an inclusive audio description (designed for sighted, blind and partially blind listeners), compared to a standard audio guide, is that through description, it intentionally guides attention around the artwork. For sighted listeners, this has been described as a form of guided looking (Eardley et al., 2017). In other words, when a sighted visitor listens to an audio description, their attention is directed around the artwork or artifact by the words they hear and this directing of the gaze can support deeper engagement with the work.

Having acknowledged the potential benefits of AD for all audiences, it then becomes important to consider some of the practice-based assumptions that can underpin the creation of an audio descriptive guide (see Hutchinson & Eardley, 2020). One of these is that descriptions are ideally "objective" or at least "neutral." Research in psychology also allows us to challenge what AD is traditionally understood to do. Not only does each individual attend differently to artworks, but also our core perceptual experiences are likely to be different to those of others. Although there are similarities in the features that are salient to the visual system (e.g., figures/faces in humans and brightness), there are significant differences in how we pay attention to them. For example, there are considerable individual differences in the amount of time we spend looking at those salient details (De Haas et al., 2019). There are also differences in the way that we look when our attention is focused. For example, there are cultural differences in the way that sighted people look at faces (Blais et al., 2008). Specifically, when seeking to recognize faces, Western observers tend to focus on features of the face (eyes, nose, mouth) and people from Eastern cultures tend to take a more holistic overview of the face. These culturally mediated ways of focusing visual attention can extend to objects (Kelly et al., 2010). As well as differences in the way we pay attention to a stimulus, there are differences in the way that sighted people view it. For example, there is considerable individual difference in the ways that we perceive and understand color (Emery & Webster, 2019), although there are still some broad commonalities. In fact, it is broadly accepted that no two people process sensory information in the same way (see Emery & Webster, 2019).

Intersectional positionalities

Not only do we see a particular artwork differently and attend to it differently, but we are also very likely to be bringing heterogeneous social and cultural contexts to our experience of that artwork. Influenced by the principles and importance of decolonization, there is an ever-growing mandate within the museum sector to diversify the voices and narratives represented within museums (Kreps, 2011). This speaks to one of the core roles of museums, as a source of understanding and representation of both our collective identities and of society more broadly. Running parallel with this recognition of the need for a plurality of voices and narratives is a challenge to the authoritative museum voice (Kreps, 2011). Within the context of the art museum, this reinforces the principle that there is no "right" way to interpret or experience art (Kleege, 2017; Kreps, 2011; Thompson, 2017); not even the artist has a privileged insight into the meaning of a piece of work (Barthes, 1967).

This rejection of a single way of experiencing art also challenges the need for AD to be created by museum professionals or professional audio describers working with museum professionals—an important step in challenging the colonialist prioritizing of the expert museum voice (Kreps, 2011) and the paternalistic sighted perspective (Chottin & Thompson, 2021). Our individual identities, and the social and political contexts within which those identities are formed, both feed and are fed by our understanding of and outlook on the world. The social and political contexts that underpin an identity are known as "positionality." The way in which our different positionalities relate to each other, sometimes in complement, sometimes in contradiction, is "intersectional." Disrupting accepted narratives recognizes the importance of multiple positionalities and intersections as a way of communicating understanding and experiences of cultural heritage (see also Husbands, 2019). Within the context of museum AD, if there cannot be one way to see art, nor one way of attending to art, then there cannot be one way to experience or describe it. Museum AD is thus always an interpretation (Hutchinson & Eardley, 2019), which should both own and embrace the subjectivity of the describer(s). This move is not about silencing the expertise of the museum professional; it is about acknowledging that the museum professional provides one perspective or experience, and other ways of understanding and experiencing are equally valid and may be of equal or more interest to some audiences.

Blindness gain

The framework of Blindness Gain (Thompson, 2017) reinforces the need to question the nature and purpose of traditional AD. Rather than considering blindness as a problem to be resolved or an affliction to be cured or eliminated, Blindness Gain celebrates the non-normative ways that blind people relate to the world. The three axioms of Blindness Gain are as follows: (1) blind and partially blind people benefit from access to multisensory ways of being that stimulate inventiveness, imagination and creativity; (2) non-visual living is an art; and (3) accessible approaches developed by and for blind people can benefit non-blind people (Thompson, 2017). Audio books are an example of how non-blind individuals have enhanced their lived experience by utilizing tools initially designed for and by the disabled community. Blindness Gain urges non-blind people to enhance their experiences and understanding of the world by learning from the inventive, imaginative and creative insights of blind and partially blind individuals that result from multisensory ways of being. Blindness Gain thus asserts that AD can and should be enjoyed by blind, partially blind and sighted audiences. In addition, Thompson (2017) issues a critical challenge to the deep routed assumption within AD practice that describers should be fully sighted.

In traditional AD, sighted people decide what is described and how these descriptions might best benefit a blind or partially blind audience. AD is usually either presented live, or as a recorded audio description guide. A move toward blind, partially blind, and sighted individuals co-creating AD challenges the ableist prioritizing of full vision as the optimum way to experience art and artifacts and provides the possibility of welcoming other perspectives and ideas. Chottin and Thompson (2021) applied the principles of Blindness Gain to the BPB-led co-creation of inclusive audio description at the Musée du quai Branly (Paris). They placed positionality in relation to the experience of an artwork at the center of this process. Co-creation groups were strongly encouraged to describe using multisensory language and imagery, for example, describing the sweep of an arm to illustrate an arched shape. The result of this process was co-created inclusive audio descriptions, written by committee over the course of several weeks. The ADs were well received by volunteers who listened to the descriptions, reinforcing the importance of expanding the ways in which museum AD is standardly created within the international museum sector (Chottin & Thompson, 2021). Underpinned by similar theoretical underpinnings, Hadley and Rieger (2021) explored the co-created audio description, produced by blind and low vision artists, blind society representatives, audio describers, curators, and academics, for an exhibition. This group of experts worked together discussing, debating and co-writing, and finally what was produced for use in the exhibition (see also Rieger et al. 2022).

The W-ICAD model

The research we describe in this paper was a collaborative action research project that involved museum professionals, academics and museum audiences with and without lived experience of blindness. Informed by theories and research outlined above, the goal was to provide museum professionals with a practical tool to diversify ways of understanding and experiencing museum collections through inclusive co-created audio description (see also Eardley et al. 2022). The result was a model for the Workshop for Inclusive Co-created Audio Description (W-ICAD). Within the W-ICAD model, groups made up of blind, partially blind, and sighted individuals co-create audio description, that is then used by the museum. Importantly, expertise (museum or AD) was not a critical requirement of participation. This model was developed using an iterative approach, underpinned by a participatory action research ethos. At each phase of the project, the perspectives, needs, and understanding of stakeholders including museum professionals and AD users were prioritized and represented within the development of the design and research processes (Smith et al., 2010). Our focus was on the creation of recorded audio interpretation, which can be made available in the museum or online either through the museum website or through cultural heritage platforms such as Smartify. The W-ICAD model encourages partially blind, blind, and sighted co-creators to embrace, acknowledge, and integrate their diverse voices within co-created descriptions. W-ICAD will support museums by enabling them to offer more ethical and culturally nuanced alternatives to the traditional model of a single, authoritative museum voice.

The format of this article follows the format recommended for action research (Smith et al., 2010). It provides a detailed description of each stage of the action research/design process. It also includes explicit reference to the basis for the decisions or actions that were taken during this iterative process. The aim was a transparent representation of the decision-making process, to support both external critiques, and other researchers interested in drawing on similar methodologies in their own research. We considered this detailed approach to be particularly important given the power implications that come with co-creation as a practice. The discussion provides a summary of the findings.

METHODS

Design

The development of the W-ICAD model was driven by two key phases of action research. The first phase was the Prototype Phase (2 months). This involved a 2-day workshop to test preliminary design of the W-ICAD sessions. A consultation period followed to finalize the format and instructions. The second phase was a Pilot Phase (5 months). This was driven by an iterative process of trialing, evaluating, and refining, via four workshops in the United States and three workshops in the United Kingdom. Table 1 (below) outlines the project's phases and stages within each phase.

Participants/co-researchers

The core research team for this project comprised of the authors, with broader input from Laura MacCulloch and Kate Rockhold (Watts Gallery and Artists Village) and Professor Audrey Bennett and Nicholas Lamarca (University of Michigan).

In the Prototype phase, co-researchers in that workshop included the broader research team, with additional input from partially blind contemporary visual artist and cultural inclusion consultant Zoe Partington, and representatives from audio description specialists VocalEyes (Olivia Hewkin and Matthew Cock). The preliminary design for W-ICAD was developed by the lead author, who also led the 2-day workshop, in which attendees all took part as co-creators. Following the workshop, the lead author drafted the instructions for the session, and all those who took part in the workshop were invited to make suggestions for changes.

The Pilot phase was carried out in the United States, at the Smithsonian National Portrait Gallery (NPG), and in the United Kingdom, at the Watts Gallery and Artists Village (Watts). In these workshops, researchers took the role of facilitator(s), scribe(s), and observer. There was at least one blind co-creator, one partially blind co-creator, and one sighted co-creator in each workshop. These roles were taken by external participants.

A total of 12 co-creators in the United States and 10 co-creators in the United Kingdom took part. In the United States, they were recruited through the National Federation of the Blind and American Council of the Blind. In the United Kingdom, they were recruited through social media, including Watts Gallery social media pages, community Facebook groups, and Sight for Surrey. The median age of the US participants was 40 (range: 26–67 years). Eleven participants identified as female and one as male. The median age in the United Kingdom was 46.5 (range: 19–58 years). Two participants did not give their age. Six participants identified as female, three as male, and one preferred not to say. In each group, there was one person who identified as blind, one as partially blind, and one as sighted. In one group in the United Kingdom, there was an additional person who identified as sighted. Ethical approval was awarded by the Internal Review Board of the Smithsonian Institute (US co-creators) and the Liberal Arts and Sciences Ethics committee of the University of Westminster. All co-creator participants gave informed consent and were debriefed at the end of the day.

Materials

In order to create comparable data across the United Kingdom and the United States, and based on the collections of the National Portrait Gallery (NPG), all artworks included in the

TABLE 1 Action research structure.

	Activity carried out	Data collected	Main actions
Phase 1			
Stage 1	Preliminary draft of W-ICAD model instructions		
Stage 2	Prototype workshop	Feedback received at workshop	Changes made to instructions and structure of workshop
Stage 3	Draft of instructions	Online feedback received from prototype workshop attendees	Instructions finalized
Phase 2			
Workshop 1 (US)	Full day W-ICAD model from Phase 1 trialed (Q&S; Context; writing AD)	Feedback from in-person discussions and questionnaires	Removal of AD co-writing; W-ICAD moves to ½ day structure
Workshop 2 (US)	½ day W-ICAD model with Facilitator follow-on questions (Q&S, Context, FFQ) (two sessions in 1 day)	In-person feedback and filled questionnaires	Trial a version with individuals writing AD
Workshops 3 (US) and 4 & 5 (UK)	Trialing ½ W-ICAD model with FFQ, and ½ day with individually written AD	In-person feedback and filled questionnaires	Removal of individually written AD
Workshops 6 (US) and 7 (UK)	Final W-ICAD model (Q&S, Context, FFQ)	In-person feedback and filled questionnaires	

W-ICAD workshops were portraits. The NPG includes portraits of Americans deemed to have made an impact on society through character and achievement. The Watts Gallery is mostly devoted to artworks by George Frederic Watts (1817–1904) and his wife, Mary Watts (1849–1938). For each gallery, three paintings (two single sitters and one group) and one sculpture were selected. All artworks could only be accessed through vision: The sculptures could not be touched. See Table 2.

After the Pilot workshops, co-creators' experience and feedback on the W-ICAD model were collected through online questionnaires delivered through Qualtrics. These questionnaires asked co-creators: (1) to rate their experiences of the day; (2) to critique each of the sessions that they participated in; and (3) to assess whether and to what extent they had engaged with the artworks.

In order to supplement research team meeting discussions, facilitators were also asked to fill out retrospective observation sheets about the workshops, with some additional feedback coming from scribes/observers.

RESULTS AND PROJECT ACTIONS

Phase 1: Prototype

In Stage 1 of the prototype phase, the lead author drafted the initial design for the W-ICAD model. This drew on the structure created by xxx. The lead author designed the model with five key sessions:

1. Exploring the artwork: Co-creators engage in an organic process of description and discussion, as they experience the artwork together.
2. Introduction to description: The principles of multisensory, subjective audio description with a focus on positionality and intersectionality are explained.
3. Idea-storming description: Enables co-creators to focus on descriptions they might want to create for the final piece (without having to worry about the structure of the piece).
4. Drafting the description: Co-creators start structuring a description.
5. Finalizing the description: Co-creators work together to finalize their description.

In Stage 2, the initial design drafted in Stage 1 was trialed in a 2-day prototype workshop at the Watts Gallery. The attendees of the prototype session were split into two groups to act as the co-creators in the model. Each group discussed a different portrait. The groups included one partially blind person and four sighted people. In each group, the initial description was led by the group member who was partially blind. After each co-creation session, there was a debrief session across both co-creation groups to discuss the experience and develop the W-ICAD model.

Based on Chottin and Thompson (2021), there was an explicit "no context" rule. Co-creator groups were not given the title or any information about the portraits. This lack of information is intended to replicate the sighted gallery visitor's experience of encountering an artwork before reading its accompanying label. Co-creators had a range of views on if and when context should be given to the co-creator groups. It was agreed that a context session would be worked into the W-ICAD model, to come between Sessions 2 and 3 above. This would give co-creation groups the choice of when to embed context into their descriptions but would still enable them to have an unmediated response to the artwork at the beginning of the workshop. Museum professionals pointed out that the staff time involved in running a 1-day workshop to produce a single AD has significant resource implications, particularly for smaller museums.

TABLE 2 Works of art described in the pilot phase.

Institution	Portrait 1	Portrait 2	Group portrait	Sculpture
Smithsonian NPG	*Juliette Gordon Lowe* by Edward Hughes	*George Washington Carver* by Betsy Graves Reyneau	*Eunice Kennedy Shriver* by David Lenz	*Rosa Parks* by Marshall D. Rumbaugh
Watts Gallery	*Violet Lindsay* by George Frederic Watts	*Veronica Dalrymple* by George Frederic Watts	*The Family of Alexander Constantine Ionides* by George Frederic Watts	*Model for the Monument to Lord Tennyson* by George Frederic Watts

Although Sessions 1, 2, and 3 of the initial W-ICAD design were both enjoyable and provided useful description, the co-writing sessions (Sessions 4 and 5) were less effective. In both groups, when it came to writing, co-creators started again with their descriptions, rather than referring to what they had said in Sessions 1, 2, and 3. In both groups, trying to agree on how to phrase descriptions was a slow and frustrating process and there was not enough time to finish the descriptions. Based on the time taken to reach a group consensus, it was decided that within the Phase 2 workshops, the size of co-creator groups should be reduced from five to approximately three individuals.

In Stage 3 of the Prototype Phase, the lead author drew on the findings of Stage 2 to draft a set of W-ICAD instructions and guidelines. These were finalized through consultation with the prototype groups. The key principles of the instructions were as follows: They strongly emphasized that while each person brings different interests and backgrounds to their experience of the artwork, no experience is more important or "accurate" than any other. Co-creators were told that this was the case even if the artist themselves were present in the co-creation group. Instructions made clear that there was no "wrong" description and asked co-creators to embrace their subjectivity. Questions included: What interests you about the artwork? What is it about? Are there any questions that arise? Co-creators were told to embrace differences of opinion, by making different suggestions, or offering varied interpretations of aspects of the work of art. The instructions also challenged the assumptions that AD is only for blind people and that AD should be delivered by someone fully sighted. Co-creators were told that the purpose of AD is not to provide the listener with a mental representation of the artwork, but rather it involves creating a journey or an experience for the listener.

The sessions in this new iteration of the W-ICAD model are described below.

Session 1: Question and suggestion (Q & S)

The first session became the "Question and Suggestion (Q & S)" Session. We chose this title because it embraces the notion of subjectivity and reinforces the principle that there is no one way to experience art. We asked participants to draw on other senses when describing the artwork; for example, thinking about textures, temperatures, or smells. We encouraged co-creators to think about pairing colors with an evocative adjective such as fiery red. When describing size we suggested they use comparisons with familiar objects, such as the palm of a hand, rather than metric or imperial measurements. Co-creators were also encouraged to make suggestions about emotions/thoughts/actions of people/animals in the artwork. We emphasized that we expected disagreements to arise and that this was a positive part of collective description: Different ideas can be helpful for listeners. We encouraged them also to think about the style of the painting and to comment on what they thought that might mean. For example, was there anything that suggested how the artist might have been moving or standing as they created the artwork? For example, dabs of color might mean that the artist was very close to the painting. Finally, we asked them to think about other features such as the painting's frame and where the painting is hung in the gallery space. The discussion was recorded by the scribes (because this was "research," restrictions imposed by our collaborative organizations meant that we were not able to simply record the audio). This allows co-creators the freedom to proceed at their own pace.

In line with the format of the Prototype workshop, and following Chottin and Thompson (2021), the session was designed to begin with the partially blind co-creators describing what first drew their attention in the artwork, and exploring that first impression through description. The co-creators were then invited to ask questions around those impressions. Questions might come from the partially blind co-creator asking for more information about aspects they had experienced, or from sighted or blind co-creators asking for more information about

the experience of the partially blind co-creator, or from the blind co-creator asking for more details about aspects that were described. The aim was that the sessions would then develop as a collaborative discussion, building on each co-creator's questions and suggestions. Central to the design of this session was the principle that the facilitator should intervene only if co-creators were struggling, and that they should not offer any interpretation or "correct" any interpretation or description from co-creators that was different from the accepted interpretation of the artwork. Co-creators were deliberately not given the title of the painting or the artist, or any context at this stage.

Session 2: Context

In the second session, the museum professional read a brief text about the background to artwork. This generally incorporated some of the information from the gallery label, but it also included other contextual information around the sitter and the artist. Co-creators were free to ask questions about the artwork or the context. Additionally, co-creators were told they could put the context at the end of their description, or they could weave some parts (or all of it) into the description. It was their choice.

Sessions 3 and 4: Co-writing

In the third and fourth sessions, we asked co-creators write the description together. We asked them start with the first impression, as experienced by the partially blind co-creator, and then to think about everyone else's first impression. We then asked them to think about how they would use description to lead the listener around the artwork, so that the listener might share the experience or journey of their co-creation group. They were also reminded of the principles of description that had been introduced in the earlier sessions. The instructions also asked that co-creators try to avoid visual language such as "looking at x," or "it looks like," but to think instead about using language such as "experience" or "attention is drawn."

Phase 2: Piloting

This phase involved running four W-ICAD workshops at the United States at the Smithsonian National Portrait Gallery (NPG) and three were run in the United Kingdom at the Watts Gallery. Six of these workshops included three co-creators (one blind, one partially blind, and one sighted). In one of the UK workshops (detailed below), there was an additional sighted co-creator. In each of the sessions, there was a facilitator and scribe drawn from the research team. In the majority of the sessions, there was also an additional one or two members of the research team observing. Context was delivered a museum professional at each museum (either from knowledge or through written notes).

Workshop 1 (US): Structure

The structure of this workshop was based on the structure of from Phase 1 (Prototype). It was a whole day workshop, discussing one portrait, and comprised of Q&S, Context, and two Co-writing sessions.

Workshop 1 (US): Qualitative data

Two distinct themes came out of the participant evaluation from pilot Workshop 1: a very positive morning experience (Q&S session) and a frustrating afternoon experience (Co-Writing Sessions).

The participants and researchers were positive about the Q&S session, with one participant describing it as "terrific," and a researcher observing that "[the co-creators] returned from the session talking animatedly, enthusiastically, and positively about the experience." One participant commented that:

> Good audio description gives a blind person an understanding of two-dimensional art. But just listening to audio description by itself is passive. However, the ability to ask clarifying questions and to discuss the art gives one a fuller understanding.

Comments from the research team included:

> …[the co-creators] collaborated well and were respectful of each other's suggestions and questions, there were many times they came to agreement, but also respected different responses to the portrait, or different preferences or ideas about audio description.

On the other hand, the Co-Writing session was not successful. Two key themes came out of the participant comments. Firstly, there was not enough time for "committee writing." This related closely to the second theme, the tension between the range of perspectives voiced in the Q and S session and the co-creators' perceived need to create a unified description in the Co-Writing sessions. According to one participant: "It takes time to understand people and having three strangers agree on something definitely is very time consuming." The researchers agreed: "The difficulty was that they disagreed about the detail, and they got stuck trying to decide what they wanted to say…it was hard for them to keep the personal and more subjective stuff in when they were trying to agree on words as a group." Although facilitators tried to steer the co-creators toward a subjective description of their experiences, this only served to confuse and further frustrate participants who felt strongly that there was a lack of clarity in what they were being asked to do and that the instructions were confusing. Researchers also noted that it was hard to write the description in the break-out room rather than the gallery. Describing the artwork without it being physically present was difficult. As with the group AD writing experience of the Prototype Workshop (Phase 1 Stage 2), both groups of co-creators found that writing by committee was frustrating, time consuming, and difficult to agree on.

Researchers also observed that a level of confidence with language was required to write or co-write an audio description. In the Q&S session, the process was about talking, and the language used was informal and relaxed. When writing began, the process automatically became more formal, and with that came pressure to write "correctly"; this required individuals to be confident in their forms of expression.

Workshop 1 (US)—actions

Based on the findings of Workshop 1, we removed the co-writing session from W-ICAD. Instead, we decided that the AD would be written by a member of the facilitating team after the event, condensed from the notes taken by the scribe. The W-ICAD model was redesigned

into a half-day format. The Q&S session remained, still followed by the Context session. To aid the construction of the AD, and to balance against the organic and free description in the Q&S session, a Facilitator Follow-on Question (FFQ) session was added. This session aimed to ensure that all aspects we had previously asked co-creators to focus on in the writing session were covered in their discussions.

Given that W-ICAD was now a half-day model, Pilot Workshop 2 was run with two portraits. We also changed the format so that all sessions were carried out in the gallery (where possible).

Workshop 2 (US): Structure

The day was split into two W-ICAD sessions (morning/afternoon), each discussing a different portrait. The format of both sessions was identical: Q&S session, Context, and FFQ session.

Workshop 2 (US): Qualitative data

The comments from participants were overwhelmingly positive. Two key themes emerged. The first was the positive impact of the experience on participants: "I found each portrait interesting. The more detailed a description got, the more interesting I found the artwork"; "I loved the dress and the setting in the first portrait and felt very connected even though the name had zero significance to me." Participants described being given access to the artworks beyond what is normally available: "I felt like I could understand the portraits in an in-depth way I wouldn't have otherwise enjoyed."

The second theme was the power of disability narratives. This was described in two ways. The first related to the fact that the sitter in one of the portraits experienced deafness throughout her life. This representation of disability was impactful for the participants: "It's memorable because the person contributes something to the society and the disability community." One participant also commented on the importance of the different lived experiences of the group: "I think this experience was insightful into the world of blind, partially blind, and sighted people and the differences they experience." This is reinforced by one of the facilitators: "I have looked at the portrait many times, but experiencing it with the workshop group deepened my experience and drew my attention to details I had not noticed before." This supports our claim that AD co-created using multiple voices can enhance the experience for all museum visitors.

The single negative comment identified a potential need for more explicit description of the role of the blind participant. They commented: "I wish we had been prepped a little better. We were sort of plopped in front of a painting and asked to discuss what we saw. I am blind, so I felt like I didn't know what to do. I wish there had been more of a structure at that point or at least some instructions that included my experience."

Data from the researchers revealed two main observations. Firstly, within the broader discussion, the group of three white women struggled to describe the skin color of African American George Washington Carver. Rather than them struggling to find the right words, there seemed to be a level of nervousness or discomfort, which the facilitators interpreted as the participants being afraid to say the wrong thing. This raised questions about the role of the facilitator:

> For the facilitator, [it is] not always easy to know when to intervene with prompts or questions, such as when the group gets stuck on something—how to describe a color, for example, or if there is something about the portrait that makes the

group uncomfortable, such as the sitter's skin color—or to let the group continue organically.

The second observation was that the FFQ session could be shorter and risked asking for content that had previously been discussed in the Q&S session.

Workshop 2 (US)—actions

Although feedback from participants in Workshop 2 was almost unanimously positive, there was a discussion about authenticity among the researchers, given the fact that in this iteration of the W-ICAD model, the voices of the co-creators would be mediated, using the transcripts, through a museum professional. As a result we decided to explore two different formats in each of the subsequent three workshops (one in the United States and two in the United Kingdom). The first would follow the model used in Workshop 2 (Q&S, context, and FFQ), and the second would replace the FFQ session with a session that asked everyone in the group to write their own AD of the artwork (scribed by a member of the research team). This enabled us to explore if the difficulty with AD production resulted from the previous requirement to co-write, or if it was because writing AD is in itself challenging, compared to the question and suggestion process.

The FFQ session was also slightly altered. It was decided to continue using the same facilitator follow-on questions for all co-creator groups, for a robust empirical investigation. However, the duration of the FFQ session was reduced, and if participants had largely answered the questions, minimal additional prompting for responses took place.

The next block of workshops was run in two half-day sessions. One session comprised of Q&S, Context, and FFQs, and the other comprised of Q&S, Context, and AD writing, where AD was narrated individually by each co-creator to a member of the research team, who transcribed their words. The order of the sessions was swapped in the two UK workshops in order to control for potential variations due to factors including the time of day, tiredness, and task fatigue.

Workshops 3 (US), 4 (UK), and 5 (UK): Structure

In each of these workshops, we ran two half-day W-ICAD sessions. One included Q&S, Context, and FFQ sessions. The other included Q&S, Context, and Individual AD writing/narration.

Workshops 3 (US), 4 (UK), and 5 (UK): Qualitative data

The participant evaluation evidenced a strong reinforcement of the power of the co-created descriptive process. One theme that emerged was around collaboration, with many participants emphasizing the strongly positive impact of the group process; for example: "I have never looked so closely at art before" and "we discovered things I would never have noticed alone." One participant also talked about the emotional experience: "They were able to coax feelings and impressions out of me that I would not normally have had. I would greatly enjoy doing this again." There was a subset of responses that discussed collaboration as a route to personal development, with some feedback emphasizing the opportunities to learn and to connect with the artworks "It was great to [be] working with others of varying sight too. I learned a lot about ways to look at art and people's different perceptions, and myself!". Participants also appreciated the inclusive principles of the collaboration: "It is great this project is taking notice of how people who are blind or partially blind experience and access artwork." Although

feedback about the Q&S session was largely positive, some participants reflected on the fact that they would have valued the addition of tactile items.

One of the themes that was more broadly identifiable in these workshops (and which had featured to a much smaller degree in Workshops 1 and 2) was the question of when to introduce context. Here feelings were mixed, with some participants stating: "It was good to have not revealed the context of the artwork beforehand. This avoided being unconsciously influenced in our experience of the artwork." However, others wanted to have more context, specifically when they were unpicking the artwork. In Workshops 1 and 2, informal discussions revealed that the blind participants would have liked to have more context information at the outset.

The response to writing AD was also mixed. Some participants reported that they enjoyed the process and were pleased with the outcome. However, they did mention the struggle to find the right words, and one person said she found it "stressful," which ties in with earlier themes of responding to expectations around writing. Participants felt like there was an expectation that they produce a finished AD, which caused stress: "It may have been more helpful to edit some of the original comments we made into a description." Researchers were overall more negative about the writing experience. They also reported co-creators trying to "get things right" and "performance anxiety," which suggests internalized expectations. Researchers reported that participants often tried to write a description for an imaginary third party, or create a formal AD, thereby losing all the richness of the data from the Q&S session. There were also some comments on the loss of the collaborative aspect: "…there is no co-operation session; it's very much three different perspectives." There was also a concern about the inclusiveness of the session. It was observed that blind and partially blind co-creators struggled more or less with the requirement to write an AD. It was felt that individuals writing the AD would continue to privilege the sighted voice.

Participants were invited to comment specifically on the FFQ sessions, but no direct comments were received. One participant did note that "the prompts in themselves were thought provoking and led to more discussion and other ways of looking at the picture." However, there were some comments about aspects of the workshop being repetitive. These comments were reiterated by the researchers when discussing the FFQ session. The researchers shared a feeling that these sessions did not engage the co-creators in the same way as the Q&S and Context sessions had.

Workshops 3 (US), 4 (UK), and 5 (UK): Actions

In no instance was what was produced by co-creators in these sessions suitable for use as museum AD without adaptation or extension by museum professionals. Given that mediation was always needed, it was concluded that the most authentic, descriptive voice was achieved when co-creators were not required to try to write their own AD. The final structure of W-ICAD was designed to be carried out in the gallery space. Based on the feedback from Workshops 3, 4, and 5, we removed the individual AD writing element and added a short introductory session. All sessions were carried out in the gallery space, and the duration was reduced.

Workshops 6 (US) and 7 (UK): Structure

Both of these workshops included two W-ICAD sessions. Each session included Q&S, Context, and FFQs. In Workshop 6 (US), 2 ½ hours per artwork was trialed. In Workshop 7 (UK), 2 hours per artwork was trialed.

Workshops 6 (US) and 7 (UK): Qualitative data

The data from the final two workshops reinforced the themes in the previous workshops, with participants talking about the depth of the experience: "This was one of the most profound experiences of art I have ever had." One participant also noted the impact of the instructions to think about describing in multisensory terms: "I learned a great deal about how to use more than just my vision to experience artwork through all senses and perspectives. This was one of the most beneficial workshops I have ever attended…" Participants also reiterated the power of the collaborative experience, and the importance of the equitable relationship between co-creators:

> I will remember discovering new things with new people. It helped build a bond between us and made me feel seen as a partially blind person. Sometimes I have one foot in each world but can't be identified by either one of the sighted or blind groups so this gave me a space to be partially blind.

The workshop's importance as an inclusive practice was also identified: "This work benefits everyone and creates a more accepting culture." Within the final workshops, there was one participant who had a different experience. They were drawing on a previous professional engagement with AD and struggled with the concept of creating a broader subjective AD: "Ideally, I think the entire session should take a maximum of 1 hour, otherwise detail and information is being found which may not add to the description."

Conclusions from the observer data were that, overall, Workshops 6 and 7 worked well. The shortened timing was sufficient, and observations about the facilitator follow-on questions session were similar to those made after Workshops 3, 4, and 5: "I think it covered much of the same ground as the other two sessions, but clarified some things." One of the key observations from the final sessions was that the participants did not describe the features often associated with Down's syndrome of some of the sitters in the portrait of Eunice Kennedy Shriver. This reminded us of the group's description of George Washington Carver in Workshop 3. In the FFQ session, the group were asked if they thought it was important to describe these features, and among themselves, they agreed that it wasn't.

Producing the AD

The Inclusive Co-created AD (ICAD) was produced by the first author, based on the scribe notes taken in each of the workshops. The production and audience reception of the ICAD are discussed in detail in a follow-up article, with the basic process described here. The scribe notes used for each co-created description were not a full verbatim transcription but they did include elements of verbatim transcription. Each description began with the "first impression" of the partially blind describer. The transcript of the Q&S session was then condensed and edited. The aim was to create a narrative journey through the artwork that mirrored the experience of the co-creation group. Where the conversation in the Q&S session had jumped around, making a linear pathway unclear, guidance was sought in the FFQ session, by explicitly asking participants how they would describe the attentional journey through the artwork. The words of the describers were used, and unless a sentence was only a fragment, the grammar was not corrected from "spoken" to "written" language. Equally, when the interpretation of the co-creators did not match the "accepted" interpretation of the artwork, no changes were made to the co-creator's voice. There were some additions to the descriptions. For example, when the description jumped from one part of the artwork to another, spatial linking information was provided, to support the development of an overall

structure. Similarly, where color descriptions were richer in a later part of the transcript (e.g., in the facilitator follow-on questions section), those descriptions were moved up to the main narrative.

In order to preserve the subjectivity, while trying to create an immersive experience, where an individual had talked about their own experience, it was decided to use the pronoun "we." It was also decided that to try to create a feeling of immersion, we would use the present tense, so for example: "we wonder", or "we imagine."

DISCUSSION

An open-access outline of the W-ICAD model—including the timing of sessions; instructions to participants; a guide to facilitation and a guide to constructing the final AD—is available through the University of Westminster data repository. W-ICAD is a tool, rather than an endpoint. In this discussion, we will consider the implications of some of the design choices within the model, some issues that arose during the workshops, and ways in which W-ICAD could be developed and/or improved.

Multiple voices and the problem of co-writing

The W-ICAD model was created to address the ocularcentric myths that underpin current AD practice. It challenges these myths by acknowledging that differences in perception and attention, and differences in our lived experiences, make all descriptions of museum collections subjective. Rather than shying away from this subjectivity, it is embraced and acknowledged. The intention was to create a model that opens up description, and therefore museum interpretation, to everyone. This deliberately challenges the notion of the authoritative museum voice. It does not diminish the interest or importance of the curatorial perspective on collections, or indeed the artist's intention, but rather it acknowledges that these are perspectives among many, and other people can bring interesting and insightful perspectives that may complement, challenge, or enhance our own.

The original intention was to have co-creation groups write the AD in order to ensure that the final product represented the voice of the group. This did not work. Our results indicated that while describing as a group process of communication and joint exploration was something that co-creators found relatively easy, stimulating and highly enjoyable, moving expression to a written form automatically demanded formality, levels of collective agreement and writing skills. These demands made the task neither easy nor enjoyable for co-creators. Most importantly the need to write muted the voice of the group. Instead, we decided to condense the transcripts of the conversations into an audio description ourselves. We suggest that this better preserves the voices and positionalities of the groups. We would recommend asking co-creators to review the audio descriptions that are created from their words, to advise whether they feel it represents the experience of their co-creation group. We did not do this in this project but it should be a consideration for future work.

Describing diversity and the normative default

While both the researchers and the co-creators reported very positive experiences of the Q&S sessions, it was clear that at least some participants struggled with describing diversity. Recent research into how audio describers in theater refer to human characteristics such as race, gender, body shape, and disability shows that less diversity-confident describers tend to

avoid mentioning a visible difference rather than risk "saying the wrong thing" (Hutchinson, Thompson, & Cock, 2020). Related to this is the problem of not describing the normative default. This default is culturally specific and usually aligns closely with the normative bias within the dominant culture, and the listener's own lived experience. For our US and UK co-creators, in most instances the default seemed to be white and non-disabled. When a person's race and disability is not described, the "default" assumption in the United Kingdom and United States leads listeners to assume that the person being described is white and non-disabled. This creates an exclusionary and minoritizing "othering," when racial origin or disability is only described if it is different from the default—in other words, if skin is black or brown, or if the sitter has a visibly identifiable disability. This can also result in erasure, as occurred in one group, where the physical features associated with Down's syndrome were not described and thus remained invisible to blind listeners. When asked if the features of Down's syndrome should be described, the group briefly discussed the question and concluded that it wasn't necessary. Arguably, the group worried that by labelling those physical features, but not those of the other sitters, they would be "othering" the two people in the portrait with features typically associated with Down's syndrome. However, from the perspective of the audience, withholding that information fails to acknowledge and embrace the diversity within our society that is being captured in the portrait. Ultimately, a solution to these problems of othering and erasure is the development of guidelines created with careful consultation with people with lived experience of the characteristics being described. It is crucial that describers and co-creators feel able to give voice to their anxieties about naming physical attributes and that they are supported to describe in an accurate, ethical, and non-offensive way. The starting point for developing these guidelines is co-creation with minoritized communities; asking different communities to bring their lived experiences to develop descriptions of artworks or objects that represent them. This collaborative engagement can then be extended to develop guidance and language choices so that co-creation groups and professional describers feel empowered to create sensitive and inclusive descriptions.

Museums are working hard to undo many years of erasure of disability, race, class, gender, and sexual identity. This is particularly important for the museum sector because they are, in part, responsible for perpetuating the narratives of the dominant culture. While working with minoritized communities to voice their identity provides some solutions for describing diversity, it does not address the question of normative assumptions, and the negative impact of "othering" or erasure for minoritized groups. Part of this issue arises when we consider visible and invisible differences. The portrait of Eunice Kennedy Shriver is a good example. Only some of the disabilities of the sitters are visible within the portrait. The Context session in W-ICAD and the text label in the museum explain that Eunice Kennedy Shriver was a pioneer in the global struggle for recognition and acceptance of children and adults with developmental disabilities. She established the Special Olympics and championed the Best Buddies program. The portrait in the Smithsonian is a group portrait of Eunice with four adults and one child with developmental disabilities, all of whom were being recognized for their achievements in the Special Olympics or the Best Buddies program (and beyond). The context provides an insight into the sitters and unpicks the default assumptions about those sitters whose disabilities are invisible. However, describers who rely only on the visual information presented in the portrait might potentially only describe the "othered" appearance of the two sitters with features often associated with Down's syndrome. It becomes necessary to work context into the description in these instances, and in so doing, it becomes clear that it is arguably appropriate to name all of the individuals' specific disabilities, while also explicitly identifying Shriver as non-disabled.

Context and the unmediated visitor experience

The question of when and how context is included is a major consideration in this process. Within this project, we explicitly decided to provide all context after the Q&S session. The first experience of a piece in a museum collection will almost always be visual for a sighted visitor. It is likely to be a first glimpse from a distance when they enter the gallery. These first glimpses give the beholder time to form their own imaginative connection with the works, as they decide which they will approach. Once that decision is made, they have already begun to form their own interpretation of the artwork and they then decide at what point in their relationship with the work they want to acquire the information in the text label. Conversely, traditional audio descriptions usually begin with the work's "tombstone" information: title, artist, date, dimensions, and medium. This means that the blind or partially blind beholder is never able to create their own interpretation of the artwork: As soon as they hear the work's title, their impressions of the work are channeled through what the title tells them. For example, whereas one might experience an abstract painting as an ocean, a cloud formation, an eye or a garden, if the title is given as "lighthouse," then any further engagement with the work is always going to be framed by that interpretation or definition. This is equally crucial for more figurative work. The Tennyson statue was described by the co-creation group as a grandfather looming over a child. Had the identity of the sitter been known, the interpretation would likely have been influenced by the knowledge that he was a revered Victorian poet and writer, and the experience mediated through the co-creators' assumptions or biases. By withholding this key contextual information, we wanted to create an experience analogous to the sighted person's experience of entering a gallery with no knowledge of the works it contains.

There are some instances where the subject of the artwork is more likely to be immediately recognizable to audiences. This was the case with the sculpture of Rosa Parks (NPG). In this instance, the name was shared much earlier (inadvertently), but it created a more equitable grounds for discussion. Some co-creators strongly disliked the lack of context, while others very much appreciated it. The strongest preference for providing context early came from some of our totally blind co-creators. But other co-creators very much enjoyed not having the context and were very pleased when their co-created explorations were in line with information that was contained within the context. For artworks, we suggest that tombstone information should be made available in a separate audio file, so that each listener can chose when and how they engage with it. This replicates the decision the sighted visitor makes to read or not read the gallery label. However, we would also suggest that different kinds of paintings and collections may benefit from different approaches in terms of what is included in the main description. Where the subject of a portrait, or the name of an object is readily available, then naming it sooner becomes important.

Thinking beyond the tombstone information of a label, there may also be reasons for working context into the description process. How context is worked into a description is different in the United Kingdom and the United States. We would suggest that in some instances, such as the Shriver portrait, it should be included in earlier. We do not know if Shriver has a disability. We know she does not appear to have outward characteristics of one, and we know that she did not identify as disabled within the public sphere. We know that she grew up with a sister with a developmental disability. Potentially that could be included. Disability identity, and identities more broadly are more than a lived experience, they can be a social and political statement. Where possible, and appropriate, this also provides the opportunity to broaden representation by identifying other traditionally minoritized identities that are "othered" by normative assumptions, such as gender or sexuality. Similarly, while W-ICAD was created within art museums, it is applicable within all museum settings.

While W-ICAD was created within art museums, it is applicable within all museum settings. Within collections where the narratives are potentially stronger than the identity of the object,

such as collections focused on history or science, ways of working context into inclusive co-created audio description become more important. Participants were explicitly asked about this in the FFQ session of W-ICAD. While we advocate flexibility in the ways in which context is made available or incorporated, we nevertheless call for care to be taken that description is not compromised or replaced by context because this undermines the possibility of an unmediated visitor experience. It is always possible to include additional files for additional context.

W-ICAD and "slow looking"

There are similarities between the W-ICAD Question and Suggestion session and Slow Looking practices that are already used in some museum programs (see Tishman, 2017). Slow Looking is grounded in the idea that learning can be enhanced through prolonged observation, drawing on all senses (Tishman, 2017). Although the concept developed from an ableist ocularcentrism, Slow Looking can be reframed in a more inclusive way as exploration and discovery through focused attention to all the senses. This is very much in line with the practice within W-ICAD. However, there are some differences.

Like standard AD practice (Fryer, 2016), slow looking is usually done by trained experts or facilitators (Tishman, 2017). It is true that the literature discussed above suggests that the majority of museum goers struggle with sustaining attention for more than a fleeting moment. It is also true that for many description is not an easy process. It requires people translate perceptions (which are often given little explicit thought) into language. Nevertheless, W-ICAD does not require co-creators to be trained museum or audio description professionals; our co-creators were members of the public who had agreed to take part in the research process. Many were aware of what AD was and a few had some involvement with AD development. But broadly speaking, they were untrained. It is significant that the W-ICAD structure led to rich, varied and barely facilitated conversations that produced engaging and appropriate material for AD development. There were instances were facilitators needed to encourage participants to put words to their perceptual experiences, or ideas or emotions. However, our research suggests that when AD development moves from an individual written practice to a collaborative spoken practice, training is no longer required. Within our motivated adult groups, facilitation was also minimal. In W-ICAD, the museum facilitator is no longer an educator or trainer, but rather one voice among a group of co-creators. This leads to a more equitable relationship between professionals and visitors.

W-ICAD also differs from slow looking in its relationship with the "first impression." Following Chottin and Thompson (2021), W-ICAD asks co-creators to think about what first captures their attention, before consciously tracing where attention is next captured. In other words, W-ICAD encourages deep exploration of the journey or narrative that a beholder's attention takes through an artwork or museum collection. On the other hand, slow looking uses tools that "all involve moving beyond first impressions towards more immersive prolonged experiences that unfold slowly over time" (Tishman, 2017, p. 5). This process is potentially harder for someone with full vision, who may be less aware of the rapid journey that their perceptual processes have made to get to their initial interpretation impression. Although W-ICAD was developed as a tool to enable museums to create more diverse, inclusive and equitable forms of audio-described museum interpretation, the success of the Q&S sessions strongly suggests that this process would be of interest and benefit to visitors within inclusive public programs, that is, programs aimed at visitors irrespective of their level of sight. We have not yet explored how W-ICAD works with groups who are all fully sighted. We suspect that W-ICAD could provide an inclusive way of broadening the range of hitherto unheard voices whose perspectives can enhance and enrich our understanding of different museum collections. While we would like to explore the use of W-ICAD in public programming, we note that our model may

not meet the expectations of some museum visitors. Since the 19th century, when the current public model of museums was popularized, the contract between museums and audiences has been largely based on a colonialist model of knowledge bearers and knowledge receivers. This is arguably why some people go to museums, and others do not. Many people who take the time to attend a public program do so to be both educated and entertained. W-ICAD will not necessarily satisfy this desire to learn something because it replaces the traditional knowledge bearer-receiver dynamic with an equitable model in which each participant's contribution is equally valid. We believe that W-ICAD has the potential to work well as a public program; however, it is important to think carefully about how and to whom it is promoted.

Single-voiced AD

We recorded the inclusive co-created ADs produced during the project as single-voiced digital tracks. We used a mobile phone to make the recordings, and we did a small amount of editing using Audacity. We recorded these ICADs so that we could compare audience responses to our co-created AD with responses to standard AD written by museum and AD professionals. Data from these comparisons will be available in a forthcoming publication. Had we recorded the ICAD for use by museums, we would have included a statement of authorship/positionality at the beginning of each track. However, even if the listener is aware of the co-created nature of the description, they may still consciously or unconsciously invest the single voice they hear with the authority of the museum professional. When we presented the W-ICAD model to museum professionals, we discussed the use of several voices on the recorded audio instead. One challenge here is that the Q&S session creates a very organic and interwoven discussion. Descriptive elements were sometimes made up from experiences of more than one of the co-creators. This makes it hard to attribute descriptions to specific individuals. Nevertheless, while it is not feasible to parse final description into the co-creators' individual contributions, using multiple voices within the final AD may still provide a better representation of the process of group creation, which is more representative of the description.

Beyond the visual

In our Pilot Phase, we found that the W-ICAD model can generate engaging and creative descriptions of the visual experience of looking at a portrait. Nevertheless, the understanding that audio description is a visual to verbal translation (Fryer, 2016) very much limits the possible applications of AD within the museum sector. Having been prohibited for many years, touch and multisensory experiences are re-emerging within museums in a very controlled way for the majority. However, they are still often very visually mediated. We suggest that W-ICAD is equally applicable as a tool for describing audio, tactile, or multisensory museum experiences. Museums sometimes give blind and partially blind visitors privileged access to objects that are not usually handled by the sighted visitor. Kleege (2013) points out that during these touch tours, museums would do well to "collect the observations of blind visitors" and use them "to expand cultural knowledge by including tactile aesthetics" in their guides. W-ICAD can be adapted to enable co-creation groups to describe what happens when they touch and/or smell an object as well as or instead of looking at it. Where these senses are not available to the beholder, this will create a richer way of experiencing the item. Where these senses are available, description will support people in their tactile/olfactory/other sensory exploration, guiding attention in similar ways to which it can guide attention in vision. For sound, there is also the potential to describe this with

and for audiences who are D/deaf. Taken together, the results become inclusive descriptive interpretation.

CONCLUSION

A key goal of this project was to destroy the myth that full vision is necessary or sufficient for the creation of audio description. This is underpinned by the research from psychology and neuroscience that shows that visual experience and visual attention are both individual. As such, there is no single visual experience that can be described. In other words, experience, and the description of that experience, is always subjective. The descriptions produced by W-ICAD were collaborative. They were led by the experience of a partially blind co-creator. They thus provide a way of exploring and experiencing in which different perspectives and opinions can enrich our understanding. W-ICAD is not a rejection of the curatorial voice, nor of audio description informed by that. Rather, it shows that different types of audio description can serve different purposes and will meet the needs or desires of audiences differently. Nevertheless, W-ICAD calls into question the fallacy of visual privilege which has limited the experiences of art and museum collections for many blind, partially blind, and non-blind audiences.

CONFLICT OF INTEREST STATEMENT
The authors have no conflicts of interest to declare. All co-authors have seen and agree with the contents of the manuscript, and there is no financial interest to report. We certify that the submission is original work and is not under review at any other publication.

DATA AVAILABILITY STATEMENT
The data that support the findings of this study are available from the corresponding author upon reasonable request.

ORCID
Alison F. Eardley https://orcid.org/0000-0002-6036-9817
Hannah Thompson https://orcid.org/0000-0001-9179-1685

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AUTHOR BIOGRAPHIES

Dr **Alison F. Eardley** is a Reader (Associate Professor) in Psychology, Cultural Heritage and Inclusion at the University of Westminster (UK). She is an interdisciplinary researcher using psychological theory and methods to support broadening participation and inclusion within the museum sector. Her work on inclusive multisensory interpretation (including audio description). She is Co-I on the AHRC https://sensationalmuseum.org/project.

Vanessa E. Jones is an accessibility and inclusion specialist at the Smithsonian National Portrait Gallery (US). With degrees in museum education and art history, she creates, manages, and evaluates accessible programs and projects.

Dr **Lindsay Bywood** is a Research Fellow at the University of Westminster (UK) and an audiovisual translation practitioner. Her research interests include inclusive design within museums and galleries; foreign language subtitling and AI in the translation context.

Professor **Hannah Thompson** is a partially blind academic and activist, based at Royal Holloway, University of London (UK). Her research focuses on the intersections between Critical Disability Studies and French Studies. She is currently working on creative audio description in museums galleries and theaters. She is PI on the AHRC https://sensationalmuseum.org/project, which aims to "use what we know about disability to change how museums work for everyone."

Dr **Deborah Husbands** is a Reader in Psychology at the University of Westminster (UK). Her research interests include using critical race theoretical frameworks and qualitative research methods to understand the experiences of minoritized and marginalized communities.