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Original Research

Broadening Participation in the Museum Experience Through Interactive Aesthetics: Enabling Access to Pluripositionality in the Inclusive Co-Creation and Dissemination of Audio Descriptions

Audrey G. Bennett, University of Michigan, USA
Nicholas Lamarca, University of Michigan, USA
Caitlin Dyche, University of Michigan, USA

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Abstract: For generations, large swaths of the population, including those who are blind and partially blind, have been mostly marginalized from experiencing visual art at museums. In recent years, audio description (AD) has emerged to facilitate those individuals' experience of museum artwork. However, such ADs are typically created solely by museum professionals, mostly without input from visitors. Thus, a team of multidisciplinary scholars and museum professionals investigated the development of AD collaboratively by museum professionals and visitors through a workshop at the National Portrait Gallery in Washington, DC. A team comprising visitors who are blind, partially blind, and sighted along with museum professionals experienced the George Washington Carver portrait by the artist Betsy Graves Reyneau toward the development of AD. Subsequently, the museum professionals evaluated the workshop's outcomes–four ADs from four different positionalities–virtually with English-speaking museum visitors. This research revealed that museum visitors who are blind, partially blind, *and* sighted can experience museum art meaningfully through a workshop on the inclusive co-creation of AD. We found that museum visitors prefer culturally diverse perspectives and contributions from lay and professional observers, a mixture we refer to as "pluripositional." We also found that the museum visitors enjoyed simultaneous listening to AD of artwork when viewing the artwork in a web-based experience. These findings support the need for multimodal (digital and analog) museum experiences that engage blind, partially blind, and sighted museum visitors in the inclusive co-creation of ADs of artwork accompanied by open access to their pluripositional outcomes.

Keywords: *Interactive Aesthetics, W-iCAD, Audio Description, Pluripositionality, Blindness Gain, Inclusive Museum, Multimodality, Generative Justice*

Introduction

An interdisciplinary challenge exists in the museum experience that privileges sighted visitors in culturally specific ways. Generally, museums have carried the implicit assumption that it is acceptable to aim for a unisensory interpretive experience for visitors making sight compulsory to access visually presented information and that sight alone is sufficient. Explicit messages like "PLEASE DO NOT TOUCH THE ARTWORK!" are sometimes posted within the vicinity of artworks underscore this assertion. This means that it is primarily visitors who are sighted who have had the privilege of experiencing the two- and three-dimensional artwork on its walls and

in its spaces. However, those who are the blind and partially blind have been mostly marginalized from these museum experiences, although they have a legal right to access them.

Museum curators assembling an interpretative experience around an artwork have also tended to cater to a collectively homogenous cultural identity in its visitors. For instance, appearing on the walls next to the artwork on a placard, one typically finds an exegesis of the artwork and identifying information traditionally told solely from the museum professional's perspective. In museums in the US, this written information, typically in English, provides access to the artwork's historical place and other contextual information associated with it and its creator. However, it relays implicit messages like (1) "English speakers only," (2) "You must be an artist or art historian to understand this piece fully," and (3) "You must be sighted to experience this piece," all of which arguably hinder the visitor's extraction of meaning and access to the cultural and material engagement necessary for aesthetics to become transformative and potentially liberatory. Reduced in this way, the visitor's encounter with the artwork becomes vaguely transactional, a fixed price for a fixed meaning. That is contrary to the intentions of most museum curators, who rely on and cater to the emotive value generated by the artwork when the visitor leaves the museum with, at the very least, a memorable experience. The question then is: How might we become better at facilitating culturally diverse stakeholders, that is, museum professionals and visitors, art historians, artists, and relevant non-human agents, to empower more of an artwork's aesthetics and transform the availability of its more profound meanings to *all*?

The recent emergence of audio description (AD) may provide an answer to the question. According to Snyder (2005), the literary art form of AD was first developed in the US to provide a verbal version of visual events for people who are blind or partially blind to hear what cannot be seen. One can access ADs at theater performances and other outputs from the entertainment industry. AD has since then expanded to museums as a resource to bridge the divide between art and blind and partially blind visitors. In fact, one of the providers of AD is the UK-based company called Smartify, which provides web-based ADs of over two million artworks from museums worldwide (though only a few are from the Smithsonian Institution). There is also VocalEyes, a registered charity in the UK that works with local arts organizations to identify and remove barriers to access and inclusion for blind and partially blind people by providing live ADs of theatrical plays, museum art, heritage sites, and so on. More recently, a US-based organization known as CultureConnect has emerged to provide digital access to museum experiences in the US. However, even when museums can offer ADs, either prerecorded or live tours, that provision tends to be limited regarding the number of collections, exhibits, or artworks for which they are available and for live tours when offered. AD is a resource-demanding component of museum experiences, a limitation that allows only a small percentage of museums to offer it. Even in museums that have a multimodal presence that provides World Wide Web access to audio-described artworks in their collections, there are still a vast number of artworks that are not audio-described.

With the evolving presence of ADs in museums, we also need to consider more inclusive methods that allow their co-creation across not only sensory barriers, but also barriers by race, class, gender, and other forms of exclusion. The question becomes: How might we leverage this evolving multimodal access—through analog and digital means—to broaden participation in the museum experience by culturally diverse and ability-diverse visitors and, thus, simultaneously circumvent sensory and social barriers? To address this question, we investigated the inclusive co-creation of ADs in a workshop at the Smithsonian Institution and evaluated its outcomes: four ADs of a painting told from different cultural perspectives. Our aim was to challenge the following normative biases associated with the creation of ADs:

- ADs are "universal" (i.e., race, class, gender, and other identity markers do not matter) and unimodal. Cultural markers of identity or positionality do not matter in AD creation, and ADs should be delivered from one perspective: that of the museum professional. In opposition to this bias, Bennett (2012) argues that images communicate different information to different viewers due to cultural differences; we must engender interaction with their aesthetics to extract meaning that is cognitively and behaviorally transformative. Through "Interactive aesthetics" (Bennett 2002, 2017, 2021, 2024), we can facilitate interaction with an image through multisensory and multimodal interaction. Thus, how might we create and disseminate ADs of museum artwork that are inclusive of different positionalities and accessible through multiple modes of interaction–analog and digital? How might we facilitate multisensory and multimodal interaction with the museum artwork to liberate transformative meaning for marginalized communities?
- AD should be purely objective and generated by an authoritative top-down process. In opposition to this bias, we ask for generative justice, that is, that the value generated by all involved in the creation of inclusive, AD return to all contributors and their communities (Eglash 2016). Thus, how can the inclusive co-creation of AD be more bottom-up and generative, rather than a process of top-down, value extraction?
- AD in the museum is solely for those who have gained or are gaining blindness. In opposition to this bias, Eardley et al. (2017) found that AD benefits sighted visitors too by enhancing their memorability of the artwork.
- Sighted people should deliver ADs to blind or partially blind visitors. In opposition to this bias, Kleege argues that "blindness is a gain" (2017) in the sense that it can add its own perspective to the interpretation of visual art (Chottin and Thompson 2021).

Methodology: W-iCAD

An interdisciplinary and transcontinental team of museum professionals, including a museum professional and scholars (university faculty and graduate students) from the disciplines of art and design, communication and media, and psychology, collaborated to address this question,

with funding obtained from the National Endowment for the Humanities in the United States and the Arts and Humanities Research Council in Britain through their New Directions for Digital Scholarship in Cultural Institutions program. To broaden participation in the museum experience, our three-pronged goal was to provide a proof of concept for an inclusive co-creation of AD model that museum professionals could use to:

- Democratize the creation of digitally available museum ADs to enhance representation and engagement by traditionally marginalized groups, particularly those who are blind and partially blind.
- Improve visitor-facing experiences of analog and digital access to diverse artworks for all museum visitors toward fostering digitally enabled, equitable participation.
- Consider potential cultural differences in expectations and reception of inclusive AD to extend the reach of inclusive digital audio to global museum audiences.

To meet these goals, we conducted a practice session of a Workshop on the Inclusive Co-Creation of Audio Description (W-iCAD) at the Watts Gallery and Artist Center in Guildford, England, with the US and UK research teams to create a prototype of the workshop. W-iCAD derives from iCAD,[1] an inclusive, co-creation of AD approach that was first introduced in French through a 2019 workshop by French and British scholars Marion Chottin and Hannah Thompson at the Musée du Quai Branly—Jacques Chirac, who conceived of it as a means to creating descriptions of artwork that reflected "pluri-vocality" and "pluri-positionality" (Alison Eardley, Google document shared with Audrey G. Bennett, April 23, 2022). Both W-iCAD and iCAD reflect pluripositionality—multiple views from intersectional perspectives—through the inclusion of culturally diverse blind, partially blind, and sighted participants conversing about the artwork with the museum professional. However, W-iCAD differs from iCAD in terms of how it applies pluripositionality in the public dissemination of the inclusive, co-created AD. In a prototype session of W-iCAD in the UK, the US team observed that though the "co-creation" process can be inclusive of input from other participants, it still yields top-down, centered positionality when the museum professional writes the final script for the AD. In the follow-up W-iCAD session conducted at the National Portrait Gallery and described in the next section, we asked diverse participants for guidelines. These diverse insights were then "translated" into separate ADs that were written by a museum professional, whose aim was to represent the participants' interpretations while adhering to the need for a cohesive, listenable narrative.

Part 1: W-iCAD at the National Portrait Gallery June of 2022

In June of 2022, the US team convened at the National Portrait Gallery (NPG) in Washington, DC to test a version of iCAD called W-iCAD, which the museum professional

[1] The Musée du Quai Branly—Jacques Chirac website includes a sampling of audio descriptions generated from their iCAD session: https://www.quaibranly.fr/en/useful-information/go-further/visitors-tools/discovering-painting-through-listening/.

led with select museum visitors. More specifically, the workshop consisted of an NPG museum professional, a university professor, one graduate student, a sighted participant, a blind participant, and a partially blind participant. The participants' demographics in the half-day W-iCAD session included the following cultures:

- The museum professional was a White woman.
- The scribe was a US-based university professor who is a Black woman who identified as female.
- The observer was a US-based graduate student who was a Hispanic/Latino/Latinx man.
- The partially blind participant was a person of color who identified as female.
- The blind participant was a person of color who identified as male.
- The sighted participant was a White person who identified as female.

All participants sat in a semicircle (as illustrated in Figure 1) before the portrait of the African American agricultural scientist George Washington Carter painted by the artist Betsy Graves Reyneau (see Figure 2).

Figure 1: An Illustration of the W-iCAD Session at the Smithsonian Institution's NPG
Note: A museum professional, a scribe, an observer, a blind participant, a partially blind participant, and a sighted participant were seated in a semicircle in front of the wall-hung artwork illustrated by the black vertical line on the left.

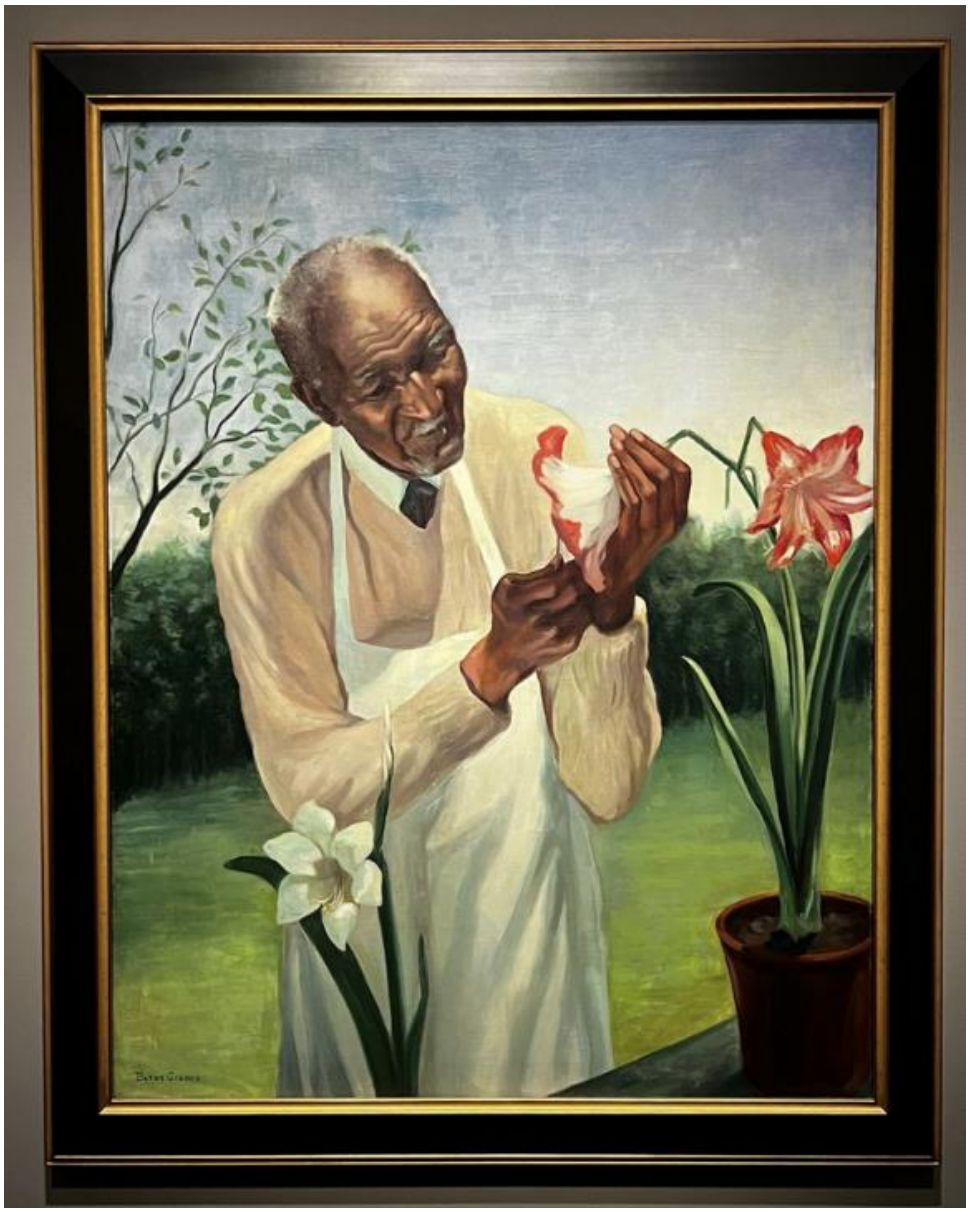


Figure 2: George Washington Carter Portrait by the Artist Betsy Graves Reyneau
Source: Bennett 2024

The NPG museum professional mediated the discussion by providing a starting prompt and then interjecting throughout the conversation as needed to keep the dialogue going, address questions, ask clarifying questions, provide contextual information, or mediate the exchange so that all participants were contributing equitably. The workshop lasted for half the day, progressing through the following phases:

- Phase 1 consisted of a collaborative oral description in front of the artwork in the gallery. The aim was to get as much information about the participants' collective experience of the artwork and how they describe it. It started with the NPG museum professional providing a brief overview of the process and asking the following question to evoke a response by the partially blind participant toward sparking a conversation between all three participants: "What is the hook?"
- Phase 2 consisted of contextual information communicated orally by the museum professional.
- Phase 3 entailed the museum professional probing participants collectively in a question-and-answer format in front of the artwork while the scribe took notes.
- Phase 4 consisted of a scribe, the museum professional, and the observer individually interviewing each participant who described how the AD should be written while each took notes and asked clarifying questions of their participant.
- In Phase 5, the museum professional developed a standard AD independent of the participants, based on what was heard during Phases 1 to 3. Additionally, another museum professional developed a set of ADs from the perspective of each of the other participants, based on the notes generated during Phase 4.

Part 2: Evaluating the AD of NPG's G. W. Carver Portrait

In this second part of the research, the NPG museum professional wrote a standard AD script for the George Washington Carver portrait informed by the W-iCAD session. Then, the US-based project investigator wrote three different AD scripts based on the scribes's notes from the W-iCAD session. Next, we recruited ninety-eight participants to evaluate the experience of listening to an AD of Carver's portrait. We tested the standard ADs created by museum professionals alongside our co-created ADs with sighted, blind, and partially blind individuals to determine how they experience standard versus co-created ADs. We aimed to determine any potential cultural differences in the reception of ADs.

The evaluation was facilitated by Qualtrics (a web-based platform), which consisted of two parts. In the first part of the evaluation, the participants provided basic demographic information, including age, gender identity, race/ethnicity, museum visitation habits, nationality, visual ability, and need for and familiarity with ADs. In the second part of the evaluation, they viewed the artwork while listening to an AD and responded to questions about the experience. Each AD lasted three to four minutes. To begin the evaluation of the AD, participants were asked to choose one of the following options:

1. I would like to listen to an AD co-written with a partially blind person of color who identifies as female.
2. I would like to listen to an AD co-written with a blind person of color who identifies as male.

3. I would like to listen to an AD co-written with a sighted White person who identifies as female.
4. I would like to listen to an AD co-written by a White female museum professional with input from a diverse group of partially blind, blind, and sighted people.
5. Choose one for me.

We successfully recruited ninety-eight respondents who are fluent English speakers living in the US (96) and the UK (2). Their ages ranged from 19 to 66, and most were partially blind or blind. Most respondents self-identified as female. The majority were White, though thirteen were self-identified as African/African American/Black; eight self-identified as Asian, Southeast Asian, and Middle Eastern; and four self-identified as Latino/a/x or Hispanic. Most of the respondents were not regular users of audio descriptive guides.

Key Findings

In Part 1, we made the following four key observations from the W-iCAD session at the NPG:

1. A blind participant asked for a sensory component she could step on when entering the gallery to hear which painting was ahead of her, along with the contextual information from the placard.
2. The blind participant stood up and asked for help from the sighted and partially blind participants by positioning her upper body (head, arms, and hands) like the subject's body was situated in the painting.
3. The White, sighted participant seemed unwilling/unable to describe the skin color of the Black subject—George Washington Carver—in the subject, thus limiting the interpretative experience of the blind and partially blind participants.
4. In Phase 4, the Black, partially blind participant noted that she wanted only objective information about the artwork to infer meaning rather than having someone else's interpretation.

Observation 1 aided us in addressing the questions: How might we create and experience ADs of museum artwork to be inclusive of different positionalities through multiple modes of interaction and access–analog and digital? How might we facilitate multisensory and multimodal interaction with the museum artwork to liberate transformative meaning for marginalized communities? Thus, we conceptualized the integration of sensory components in a speculative W-iCAD session depicted in Figure 2. Figure 3 shows photographs documenting an experimental photoshoot of a museum scene where a museum visitor speculatively interacts with various interactive technologies, including a cellphone app, floor controls, and wall-based touch technologies. In doing so, we demonstrate how interactive aesthetics could potentially be applied to the museum experience, facilitating visitors'

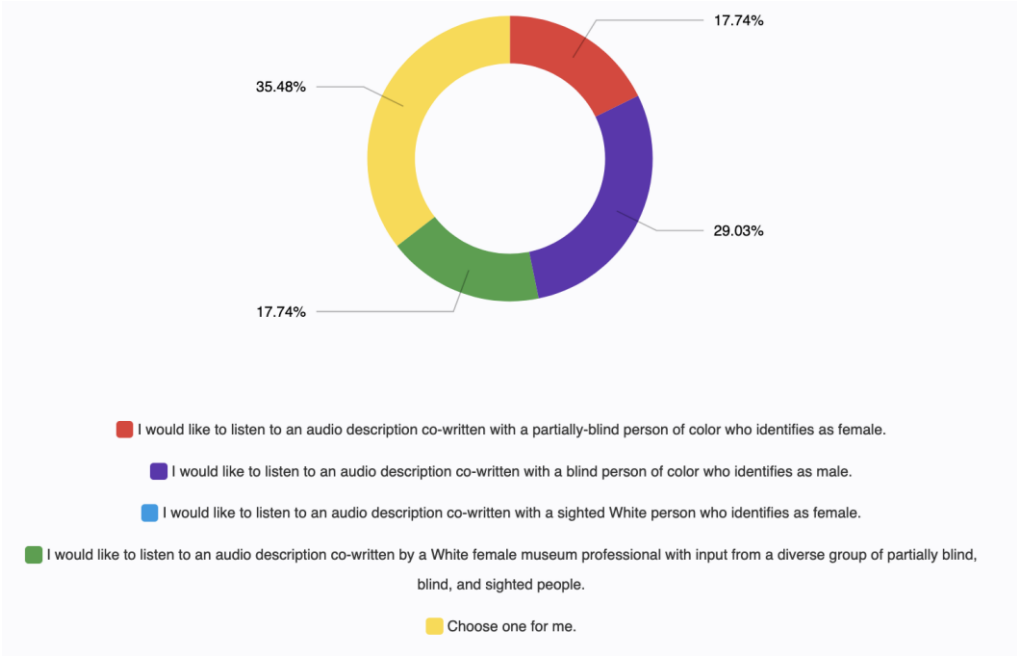
intersensory engagement with art through a simultaneity of multisensory stimuli afforded by technological mediation across time and space.

Figure 3: Photographs Documenting a Museum Scene with a Visitor

Note: The museum visitor speculatively interacts with various interactive technologies, including a cellphone app, floor controls, and wall-based touch technologies.

Source: Lamarca 2024

Observation 2 underscores the importance of and need for collaborative interpretive experiences like that offered through W-iCAD sessions that bring blind and partially blind visitors in collaboration with sighted visitors in interpreting museum art. As Chottin and Thompson argue, "sight is not the only way to understand or appreciate a painting" (2021, 41). Finally, through observations three and four, we discovered a need for multimodal ADs that reflect "pluripositionality" (top-down and bottom-up perspectives along with different "intersectional" [See Crenshaw 1991] perspectives based on gender, age, sexuality, ethnicity, race, and other cultural identities). Figure 6 shows a screenshot of how ADs from different cultural perspectives of the participants and museum professionals have been disseminated to the public in an open-access, digital experience facilitated by a webpage. It illustrates how pluripositionality can be facilitated in disseminating inclusive, co-created ADs through the deployment of interactive aesthetics.



#	Field		Choice Count
1	I would like to listen to an audio description co-written with a partially-blind person of color who identifies as female.	17.74%	11
2	I would like to listen to an audio description co-written with a blind person of color who identifies as male.	29.03%	18
3	I would like to listen to an audio description co-written with a sighted White person who identifies as female.	0.00%	0
4	I would like to listen to an audio description co-written by a White female museum professional with input from a diverse group of partially blind, blind, and sighted people.	17.74%	11
5	Choose one for me.	35.48%	22
			62

Figure 4: Participants Choose Which Audio Description They Would Like to Listen To

Note: The options were: (1) I would like to listen to an AD co-written with a partially blind person of color who identifies as female. (2) I would like to listen to an AD co-written with a blind person of color who identifies as male. (3) I would like to listen to an AD co-written with a sighted White person who identifies as female. (4) I would like to listen to an AD co-written by a White female museum professional with input from a diverse group of partially blind, blind, and sighted people. (5) Choose one for me. Of the ninety-eight recruited to partake in the evaluation, sixty-two answered the question, and of the forty who chose a perspective, the majority (29) chose a perspective other than the museum professional's, and none chose the AD co-written with a sighted White person who identifies as female.

There were no required questions on the evaluation of the ADs in Part 2. Thus, participants could refuse to answer a question and end the evaluation whenever they desired without providing a reason. Of the ninety-eight participants recruited sixty-two evaluated the AD, as shown in Figure 4. Twenty-two preferred that we choose an AD for them. They were taken to the AD co-written by the museum curator by default. Note that they could have been taken to any of the other options by default. Of the forty who chose a perspective, the majority (29) chose a perspective other than the museum professionals, and none chose the AD co-

written with a sighted White person who identifies as female. Eighteen evaluators opted for the second option: The AD was co-written with a blind person of color who identifies as male. Eleven evaluators chose the first option: I would like to listen to an AD co-written with a partially blind person of color who identifies as female. Only eleven participants chose the fourth option: I would like to listen to an AD co-written by a White female museum professional with input from a diverse group of partially blind, blind, and sighted people. One limitation of the survey is that it did not provide the participant with an opportunity to listen to a different AD, and the results do not show whether participants may have changed their mind after listening to the initial AD and gone back to choose a different one.

Participants were asked to think about their experience with the artwork and AD and were given the following seven statements:

1. I enjoyed this experience very much.
2. This experience was fun to do.
3. I thought this was a boring experience.
4. This experience did not hold my attention at all.
5. I would describe this experience as very interesting.
6. I thought this experience was quite enjoyable.
7. While I was doing this experience, I was thinking about how much I enjoyed it.

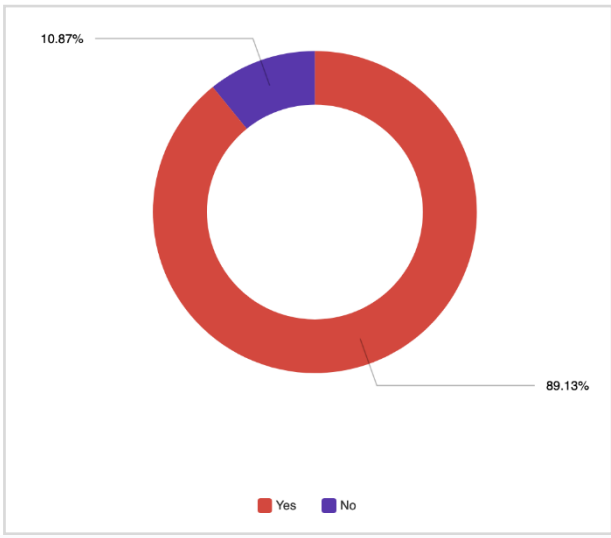
Table 1: Average Score of Each Statement by Participants
Who Evaluated the AD and Chose to Respond to the Question

Statement Rated by Participants	*Number of Participants Responding with a 1, 2, or 3 Rating*	*Average Score*
1 I enjoyed this experience very much.	42	2.29
2 This experience was fun to do.	42	2.74
3 I thought this was a boring experience.	42	1.12
4 This experience did not hold my attention at all.	41	1.17
5 I would describe this experience as very interesting.	42	2.33
6 I thought this experience was quite enjoyable.	40	2.48
7 While I was doing this experience, I was thinking about how much I enjoyed it.	41	2.24

For each of the statements, each participant was asked to write a score of 1, 2, or 3 in the box below each statement, where 1 indicates "not true," 2 stands for "somewhat true," and 3 represents "very true." Table 1 shows the average scores for each statement by the number of participants who chose to respond to the question. One can conclude that most of the participants who evaluated the AD found the experience enjoyable, fun, and interesting. Furthermore, all sighted participants, when asked, confirmed Eardley et al. (2017) finding that they benefitted from listening to AD while viewing the artwork online. Some of the responses received from sighted participants included:

> Yes, I enjoy audio tours at museums and descriptions such as this because I am able to take note of details that I might not have noticed.
>
> Yes, I think the AD actually helped me notice more details and provided key background information.
>
> Yes, I think it was nice to have someone explain the details in the piece and the artist's intentions, something I would not have gotten if I was just looking at the piece on my own.
>
> Yes. I liked hearing the description of him as similar to a grandfather caring for his grandchildren. It put words to the feeling of the painting.
>
> Yes. Not only was it enjoyable and insightful to follow along and I looked more carefully at each individual aspect of the painting, giving them more attention than I would have otherwise, the additional information regarding the subject matter (namely that the figure depicted is George Washington Carver), the exhibition it was displayed in, and more information about the artist was helpful. I found it particularly interesting to know this was the only from-life portrait painting of Carver.
>
> I feel like I have benefitted from this through the description providing me another set of eyes to view the artwork.
>
> Yes—I would not have known what an amaryllis plant looked like, but the audio recording included that information. It has information that is not necessarily directly a visual description of the subject, but vital/interesting contextual information.

When asked if given an opportunity to experience a collaborative interpretation of artwork at a local museum with diverse, blind, partially blind, sighted, and neurodivergent participants, would you participate, most of the participants responded said "yes," as shown in Figure 5.



#	Field		Choice Count
1	Yes	89.13%	41
2	No	10.87%	5
			46

Figure 5: Participants' Responses When Asked If They Would Participate

Note: When asked if given an opportunity to experience a collaborative interpretation of artwork at a local museum with diverse, blind, partially blind, sighted, and neurodivergent participants, would you participate, of the forty-six participants who responded to the question, forty-one responded "yes" and five responded "no."

Overall, the results suggest that culture plays a role in the reception of ADs in that museum visitors prefer culturally diverse perspectives when viewing web-based artwork accompanied by ADs. Pluripositionality is important not only during the W-iCAD process, but also in the public dissemination of the inclusive, co-created AD. The pluripositional ADs of George Washington Carver's portrait generated from the W-iCAD session at the NPG are openly available for viewing online, as documented in Figure 6.

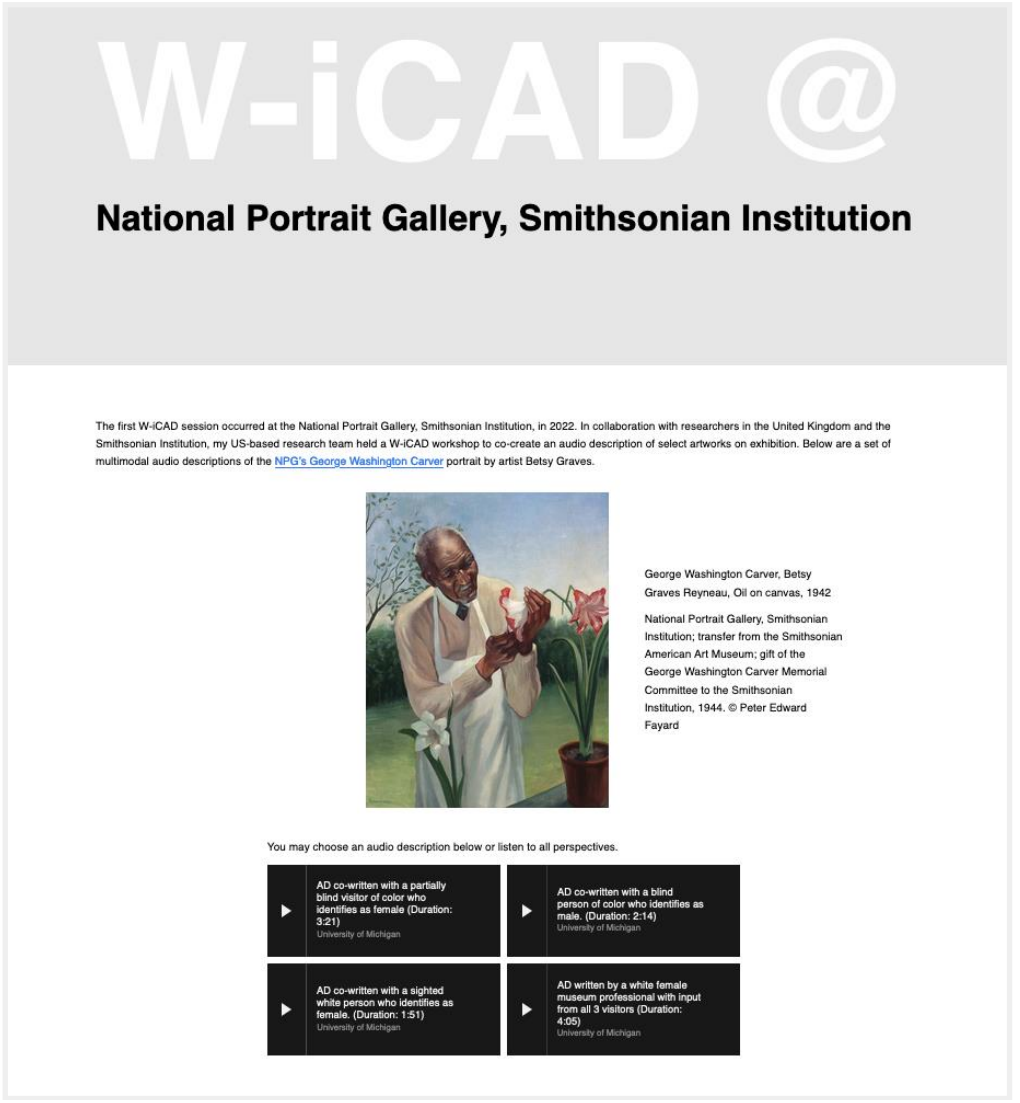


Figure 6: Screenshot Webpage[2]

Note: This page is illustrating pluripositionality in the dissemination of inclusive, co-created AD through the deployment of interactive aesthetics—an open-access webpage showing the NPG's George Washington Carver portrait along with four options, from which the viewer can choose to hear one or all.

Source: Bennett 2024

Conclusion

Today, museums still have millions of framed paintings that hang on the walls accompanied by concisely written placards attached to the walls next to them, offering only analog access.

[2] https://www.audreygbennett.com/baohouse/wicad.

However, artwork presented in this traditional manner is designed to privilege sighted museum visitors. Our research shows that intersectional museum visitors, particularly those who are blind, partially blind, and sighted, can gain appreciable cross-cultural value when they view and converse about visual art together in a workshop setting. It also shows that museum visitors prefer pluripositionality in publicly disseminating audio-described museum artwork. This article discusses research findings on the use of W-iCAD to enable museums to be more inclusive of museum visitors who are blind and partially blind in a way that can benefit all visitors, including those who are sighted. Museums can use the pluripositional W-iCAD approach introduced in this article to enhance their accessibility provisions to engage traditionally marginalized visitors (particularly those who are blind and partially blind) and those who are sighted.

Currently, our set of participant-generated ADs, as well as one representing the museum professional's perspective, are available openly online.[3] There, blind, partially blind, and sighted online visitors may choose which description to listen to as they observe the artwork. They may also opt to listen to all of them. The W-iCAD approach, introduced in this article facilitates inclusive co-creation of AD as a generative, bottom-up, community-engaged process (i.e., "generative justice" as defined in Eglash [2016]), instead of a top-down process that yields an AD by a sole, sighted museum professional. Our aim was to provide museum professionals with a robust, collaborative model reflective of pluripositionality to enrich and extend their accessibility provisions, and thus engage traditionally marginalized audiences, particularly those who identify themselves as blind and partially blind. Future research will explore the use of W-iCAD to engage other marginalized groups (including visitors who are neurodivergent) and its generalizability to other cultural contexts like science centers, cultural heritage organizations, and the like.

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[3] https://www.audreygbennett.com/baohouse/wicad.

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The authors declare that generative AI or AI-assisted technologies were not used in any way to prepare, write, or complete this article.

Informed Consent

The authors have obtained informed consent from all participants.

Conflict of Interest

The authors declare that there is no conflict of interest.

REFERENCES

Bennett, Audrey. 2002. "Interactive Aesthetics." *Design Issues* 18 (3): 62–69. https://doi.org/10.1162/074793602320223307.

Bennett, Audrey. 2012. *Engendering Interaction with Images*. Intellect & University of Chicago Press.

Bennett, Audrey. 2017. "Dynamic Interactive Aesthetics." *Journal of Design Research* 2 (2): 91–104. https://doi.org/10.1504/jdr.2002.009820.

Bennett, Audrey. 2021. "Agentic Design: An Emergent Approach to Generative Justice." *New Design Ideas: Special Issue on Generative Justice in Design* 5 (1): 5–20.

Bennett, Audrey. 2024. "Designing Multimodal Technical Instructions for Cross-Cultural Resonance Using a Culturally Inclusive Approach." In *Technical Writing Spaces: Readings on Writing*, vol. 6, edited by Kirk St. Amant and Pavel Zemliansky. Parlor Press.

Chottin, Marion, and Hanna Thompson. 2021. "'Blindness Gain' as Worldmaking: Audio Description as a New 'partage du sensible.'" *L'esprit Créateur* 61 (4): 32–44. https://doi.org/10.1353/esp.2021.0045.

Crenshaw, Kimberlé. 1991. "Mapping the Margins: Intersectionality, Identity, and Violence Against Women of Color." *Stanford Law Review* 43 (6): 1241–1300. https://doi.org/10.2307/1229039.

Eardley, Alison F., Louise Fryer, Rachel Hutchinson, et al. 2017. "Enriched Audio Description: Working Towards an Inclusive Museum Experience." In *Inclusion, Disability and Culture: An Ethnographic Perspective Traversing Abilities and Challenges*, edited by Santoshi Halder and Lori Czop Assaf. Springer International Publishing.

Eglash, Ron. 2016. "An Introduction to Generative Justice." *Teknokultura* 13 (2): 369–404. https://doi.org/10.5209/rev_tekn.2016.v13.n2.52847.

Kleege, Georgina. 2017. *More Than Meets the Eye: What Blindness Brings to Art*. Oxford University Press.

Snyder, Joel. 2005. "Audio Description: The Visual Made Verbal." In *International Congress Series*, vol. 1282. Elsevier.

ABOUT THE AUTHORS

Audrey G. Bennett: University Diversity and Social Transformation Professor, Penny W. Stamps School of Art and Design and the Department of Communication and Media, College of Literature, Science, and the Arts, University of Michigan, Ann Arbor, Michigan, USA
Corresponding Author's Email: agbennet@umich.edu

Nicholas Lamarca: MFA Graduate, Penny W. Stamps School of Art and Design, University of Michigan, Ann Arbor, Michigan, USA
Email: lamarca@umich.edu

Caitlin Dyche: MA Graduate, Department of Communication and Media, College of Literature, Science, and the Arts, University of Michigan, Ann Arbor, Michigan, USA
Email: dychec@umich.edu