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Centering Humans and Humanity in Visual Resources: An Interview with Rebecca Y. Bayeck, Ph.D.

Abstract

In this interview, Rebecca Y. Bayeck, Ph.D., Assistant Professor of Instructional Technology & Learning Sciences at Utah State University, calls upon her interdisciplinary research and study of gameplay, learning environments, and emerging technologies to engage with current discussions in the visual resources field. The discussion explores inclusive digital exhibitions, artificial intelligence (AI) and algorithmic processes, and positionality. Bayeck investigates conceptual approaches to the stewardship of visual collections including “conceiving [of] visitors as students or learners enrolled in the digital exhibition classroom” and “unlearning how we define information practices.”

Keywords

Gameplay, ethics, accessibility, artificial intelligence (AI), algorithmic bias, interview.

Author Bio & Acknowledgements

Rebecca Y. Bayeck is an Assistant Professor of Instructional Technology & Learning Sciences at Utah State University.

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Rebecca Y. Bayeck (dual Ph.D., Learning Design and Technology and Comparative International Education) is an Assistant Professor of Instructional Technology & Learning Sciences at Utah State University and describes herself as a “Learning Scientist, Designer, and Technologist.” Her research spans disciplines like education and learning sciences, literacy studies, and game studies as she critically interrogates digital and analog gaming and learning environments. Through these intersections, Dr. Bayeck displays a nuanced approach to the ethical considerations that come into play wherever collections, technologies, and people meet. Visual resources professionals are constantly placed in situations where we must create new workflows and policies based on incomplete information on how the technologies and processes will impact our stakeholders, our users, and ourselves. This interview highlights that there are no easy fixes, and we cannot view these topics merely as boxes to be ticked. Dr. Bayeck encourages us to center “humans and humanity.” She reveals how a thoughtful and empathetic approach can benefit us as visual resources professionals as we continue to evaluate and incorporate emerging technologies into our work.

Sara Schumacher (SS): How has your research into gameplay impacted your approach to instruction and the creation of digital learning resources?

Rebecca Y. Bayeck (RB): Researching gameplay has allowed me to understand the intersection of learning, space, place, and design. For instance, there is no question in my mind that learning occurs and can occur anywhere. However, the space, place, and the design of the environment or setting where this learning occurs shape learning, or rather, the learning experience. So, when creating digital learning resources, I consider the digital environment/setting where I want the learning to happen and design accordingly. For this reason, places such as exhibitions are learning spaces. Hence, in creating an exhibition, physical or digital, I always keep in mind that I am designing a learning experience for the visitor. Gameplay makes learning fun; I should say that gameplay shows that learning can be or is fun. This is an aspect that I also add when creating digital learning resources.

SS: In your opinion, what are some common pitfalls or blind spots for digital exhibition designers in creating inclusive digital exhibitions?

RB: In my opinion, some of the common pitfalls for digital exhibition designers in creating inclusive digital exhibitions are a) not thinking about the exhibition as an open classroom or university; and b) not conceiving [of] visitors as students or learners enrolled in the digital exhibition classroom or enrolled at the digital exhibition university.

Considering visitors as learners will lead the exhibition designers to adopt a visitor-center[ed] approach to digital exhibition design. For example, this means identifying the visitor’s characteristics, the visitor’s needs, and finding ways in the design to meet these needs. Given that the digital exhibition is an open university and that visitors have different abilities and needs, addressing these needs and considering these characteristics will result in a more inclusive digital exhibition. When I consider the visitor to a digital exhibition, I can think of visitors who are low of vision, blind, deaf, or hard of hearing. Having these in mind when designing will cause the designer to think about ways to provide the same exhibition experience to these individuals as well, which will create an inclusive digital exhibition. This is just one example.

SS: Are there any emerging technologies or practices that you see the potential for improving accessibility for digital exhibitions?

RB: Yes, there are emerging technologies and practices with potential to improve access to digital exhibitions. I can mention artificial intelligence with text-to-speech, which can provide access to visitors who are blind or have low vision.

Touchless technologies such as the [Microsoft Kinect](#) and the [Leap Motion](#) make mid-air interactions possible. What I refer to as mid-air interaction is users – and in the case of digital exhibitions, visitors – making use of their whole body (gestures, postures, and movements), with a particular focus on hands, to interact with digital content on distant displays or remote devices. Microsoft Kinect centers more on whole-body interaction as it tracks body motion and gestures. Leap Motion only tracks users’ hand motions. Touchless technologies can make digital exhibitions accessible for individuals who have difficulties using their hands or who feel more comfortable using their bodies than their voices.

SS: What have you seen as some common misconceptions or fears about artificial intelligence (AI)?

RB: Some misconceptions or fears I have seen are that AI is going to replace humans; that AI is more intelligent than humans; AI can do better than human beings. What is always left out of the equation is this: we humans are the ones creating this technology, and if we are the inventors, how can what we create be more intelligent than us? Without humans, there is no AI.

It is my opinion that AI cannot replace humans but transforms the way we work and interact with the world and each other. Still, I cannot dismiss the fact that some jobs performed by human beings are increasingly being completed now by AI. We have the example of robots in restaurant and retail industries. In this regard, these fears can be justified. I will also add that the transformation of human interactions increasingly mediated by some form of AI-powered technology fuels these fears and misconceptions about AI. The tendency or ambition to replace human-related thinking activities with AI and science fiction movies has, in some way, anticipated these technological developments and nourished these fears as we see these technologies deployed. It is important to educate and, more importantly, place humans and humanity at the center of AI and its development.

I want to make it clear that I am not dismissing these fears and misconceptions as being baseless. The fact that the development of this technology – that is, AI – is still in the hands of [the] few makes it scary and should concern everyone. When I talk about making humans the center, or placing humans at the center of AI, this cannot happen if only a few people have control and knowledge of the deployment of this technology. I strongly believe that democratizing AI by educating the general population on how it works so we can all have at least a conceptual knowledge of AI is critical. If we are all informed, [and] thus empowered with that knowledge, we will be able to have a say on these developments and resist/oppose what is not right. For now, conversations about AI are happening just among a few, and when a limited number of people have to decide [for] the majority, they impose their vision and values on us. We end up living in a “dictatorship,” if I can use a political term. Democratizing AI will help us make it work for us all. This is why I believe AI literacy is a human right today and through my research, I am working toward advancing AI literacy. [The [Hub for AI Research in Archives](#), led by Dr. Bayeck, is an interdisciplinary hub engaged with AI and redefining the future of archiving and archival spaces.]

SS: From your experience, what are key competencies of AI literacy that might be needed both now and in the near future when dealing with visual media?

RB: I think some key competencies of AI literacy that may be needed now and in the near future when dealing with visual media include the issue of data privacy: AI literacy should address ways of protecting and preserving the privacy of the data; data ownership is another question that should be addressed. AI literacy competencies should also integrate issues of racial biases, as data show that facial recognition of Black people is difficult with AI-powered technologies. The work of Dr. Joy Buolamwin with the [Algorithmic Justice League](#), Dr. Safiya U. Noble, and Mutale Nkonde with [AI for the People](#), just to name a few, are informative in this regard.

Question provided by the Equitable Action Committee:

Can you share how you maneuver through the ethical issues of using AI or other algorithmic processes with historical data (textual, visual, multimedia...) in your research and teaching? Our members have encountered a myriad of issues, from non-white faces not being recognized in image models to skin being lightened by current digital preservation standards to, of course, information practices not aligning with other cultures' protocols (ex. Indigenous ones).

RB: Ethical issues of using AI and other algorithmic processes are a present issue and I will say that they do not only concern historical data. Though I am not currently teaching a course on AI, one thing I have done is be informed and educate others on these issues. The scholars I have mentioned above are some of the trailblazers when it comes to addressing the myriad of issues encountered by non-white faces and raising awareness about the issue of racial biases. Current digital preservation standards are still following standards that were not developed with non-white faces or skin in mind. This, from a research standpoint, is an invitation to create standards, thus algorithmic processes, that will be sensitive to all skin types and faces.

I know we cannot all be computer scientists; however, research brings light to these issues and creates the necessary awareness that will push developers to create non-bias[ed] or even less-bias[ed] algorithms. Regarding information practices that do not align with other cultures' protocols, I argue that we should learn these groups' information practices. This may mean unlearning how we define information practices, and understanding how these groups define these practices if we want to develop protocols that align with other cultures.

Furthermore, I believe we should also accept that everything is not meant to be digitized. Respect for other cultures' protocols sometimes also means just letting these groups decide how they want to preserve their material or information. In my view, sometimes, it is disrespectful when as experts, we think to keep knowledge for future generations or for the world – we should keep information from these groups in libraries or museums. Learning to sit back and let these groups make their own decisions is another way of being respectful to other cultures' protocols.

SS: What would you recommend to visual resources professionals who want to consider the impact of their personal and professional positionality on their work?

RB: I would recommend acknowledging that your personal and professional positionality inform your daily work. As humans, we know we have various individual experiences, diverse backgrounds, and that as much as we may want, we are not wired to be objective. Recognizing that we have biases

which are likely to filter through our work can enable visual resources professionals to enhance their daily work practices through professional development and collaboration.