Archaeologists have struggled with the prospect of stepping away from the typical and rather "boring" design of site reports (Lucas, 2001) toward incorporating digital technology into presentations of their findings on landscapes, objects, and people of the past. Digital technology has the potential to engage the attention of a wide audience, but also has several downsides. Thus, the question of whether digital presentations can or will do justice in presenting archaeology has been the subject of a widespread debate. As Roussou (2003) states, a successful presentation maintains interest in the material at hand, empathy toward the people of the past, and imagination, allowing viewers to make their own interpretations of the material (Silberman, 2008). In doing so, exhibits must present objects in their context, as that is the entire point of archaeology (Lucas, 2001), and must present authentic, accurate information (Silberman, 2008). As archaeologists digging at the John Brown House (JBH), we need to apply these issues to our final presentations such that our findings are accurate yet still engaging to a wide variety of audiences.

There exist many benefits to using digital technology to enhance dissemination of cultural heritage, but none are clear cut because each supposed benefit carries with it nuances which render total achievement of these benefits easier said than done. First, digital tools make it easy to capture the attention of the audience with visual appealing representations and to propagate archaeology using the internet (Roussou, 2003). However, it is all too easy to get caught up in impressive visuals, making the information presented less accurate and less "authentic" due to "abstractions and dramatic assumptions that a visual representation … must adopt in order to adhere to the visual culture of our times" (Lewi, 2003; Roussou, 2003). With such a presentation, it is challenging for viewers to form their own interpretations (Silberman, 2008), promoting interest but preventing imagination. At first glance, that technical skills are required to create digital presentations indicates that helpful collaborations between archaeologists and others are in order, but in fact, leads to a rift between the groups of people involved in the presentation. Roussou's (2003) "technologists," the engineers and designers who craft presentations, are distinguished from archaeologists, anthropologists, and museum curators. This disconnect is further illustrated in Addison's (2003) discussion of conferences at which "the VR [Virtual Reality] community attends one set [of talks], the computer scientists another, the archaeologists their own…" Such a rift detracts from the audience's ability interpret the past by furthering the proliferation of "abstractions" mentioned above.

Moreover, though digital technology offers the possibility of user-heritage interaction, logistical requirements associated with bestowing an entire audience with navigation privileges preclude interactive experiences (Roussou, 2003; Lewi, 2003), lowering the audience's interest and empathy toward the subject. However, the difficulty may be circumvented by providing users the illusion of interactivity, helping to actively engage the audience (Roussou, 2003). Furthermore, though digital technologies are widespread and flashy, they are often foreign to older generations. In particular, complicated digital interfaces alienate older archaeologists who "regard technological innovations suspiciously," inhibiting the audience's interest and idea of the legitimacy of the cultural heritage (Roussou, 2003). Lastly, two and three dimensional visualizations make it easier to visualize and conceptualize spatial and temporal relations between objects, contexts, and people (Lewi, 2003). However, such visualizations are often accompanied by massive infrastructure, hardware, and maintenance costs, which often provide the most practical barrier to implementation.

Regardless of the merits and downsides of digital representations of archaeological materials, the digital age is upon us and we must comply with its pervasiveness in our presentation of the archaeology of the JBH. However, it is first necessary to draw a distinction between user experiences for archaeological specialists and the general public. For specialist-oriented user experiences, it is expected that the audience want to and be able to draw its own conclusions from the presented data. We also expect the audience to be inherently interested in what we are presenting. Of course, dry presentations are never optimal, but we need not present something as sophisticated as virtual reality for this audience simply to keep its attention. A good example of such a presentation is the Greene Farm Archaeology Project webpage (Ryzewski and Frank) which seems appropriately suited to users familiar with archaeology because it features descriptions containing archaeological jargon as early as the project's home page ("…documenting and interpreting five centuries of cultural and natural landscape transformations …"), fairly technical articles and presentations ("Creative Documentation and Archaeological Practice: Surveying Archaeologists on Film"), and image galleries with minimal explanation of the out-of-context artifacts ("Old House Artifact Slideshow"). Archaeologists would tend toward this sort of site report because it allows them to make their own inferences and does not dilute the pure archaeology with flashy visuals. For non-specialist audiences, we can expect that a flashy, seemingly interactive presentation will be necessary to pique the audience's interests. Furthermore, providing the audience with data in context is essential to help viewers/users link the excavations to the people who lived at the site in the past. As an example, Nova's "Pyramids: The Inside Story" webpage features an interactive flash tour of the inside of the Khufu Pyramid, images of the ongoing excavation, interviews with
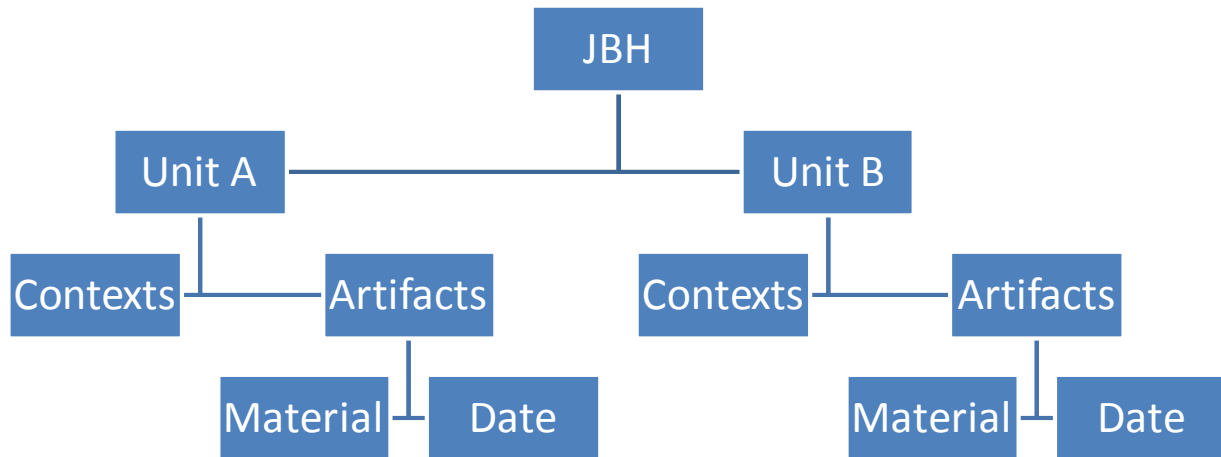
archaeologists, and basic information about Egypt, the pyramids, and the surrounding area. Indeed, Mark Lehner, the project's chief archaeologist, wants to use the website to create an accessible, "overall picture of the [archaeological] site."

Thus, for our JBH archaeology, though it will take much more time, I suggest we each create two final digital presentations. The first may be intended for specialists in the field. Thus, a presentation of strictly the artifacts, contexts, and conclusions in the style of past site reports is sufficient. It could be augmented by an online database containing images and data concerning contexts, artifacts, and the site as a whole. Such a database might involve intelligent and flexible data queries of our electronic artifact database, which would be adaptively organized by categories similar to the World Heritage metadata instead of statically by material (Addison, 2008; Appendix; Lucas, 2001). The second presentation should be intended for the general public. In designing it, we should make it visually stimulating (but not overly so, lest we lose focus on archaeology), informative (but not technical, so as to appeal to general users), and (at least seemingly) interactive. Options accessible to us as Brown students include the CAVE, flash animations, videos, YouTube, the Joukowsky Institute's wiki page, and physical exhibits around campus, though incorporating digital media into exhibits would probably be too pricy.

Despite our best efforts to nullify the many downsides to digital presentations, there is will always be issues with expanding the use of digital technologies in cultural heritage dissemination. Some presentations will appeal to archaeologists, others to tourists; some will further imagination but not empathy or vice versa; and still others will hardly interest anyone at all. Whatever the case, digital presentations of archaeological finds are here to stay. In our digital age, electronic techniques and visualizations are needed to understand, conceptualize and organize data which is ever increasing in complexity as well as to make it appealing to viewers and users of all specialties. We should apply the above issues of the advantages and limitations of digital technologies to create authentic and accurate, yet still engaging, presentations about our finds at the JBH. Lastly, if given the resources and time, we should consider two presentations: one intended for archaeologists and one intended for the general public.

Appendix

This is actually something I've been thinking a lot about. It would be useful, I think, to have an indexed database of our finds and contexts online. The database could be structured something like this:

JBH

Unit A — Unit B

Unit A: Contexts — Artifacts
Artifacts: Material — Date

Unit B: Contexts — Artifacts
Artifacts: Material — Date

Therefore, queries could take advantage of Boolean operators. Typical queries might look something like this:

- Return all artifacts from (Unit: A, B) + (Material: Stoneware) + (Date: <1800)

- Return all artifacts from (Unit: A) + (Date: <1900)

- Return all artifacts from (Material: glass)

This is very similar to OpenContext.org. With such a database, it becomes easy to group artifacts by their spatial and temporal contexts as well as by material, use, function, or significance. Historically, artifacts have been only grouped by material or spatial context (Lucas, 2001). This true "interactivity" allows database users to group artifacts adaptively to line up with their research interests at the time. Sadly, it seems that Open Context has not caught on with the majority of archaeologists. Furthermore, such a site would only work if archaeologists not only downloaded information but uploaded it, too. In this sense, perhaps we should upload a database of our JBH artifacts (and those from past years?) to the Open Context database.

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