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Visitor Engagement through Location-Sensitive Mobile Applications: The Case for Object-Focused Interpretive Tools

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Abstract

Location-sensitive mobile applications are ideally suited for providing visitors with appropriate interpretive tools to develop their confidence in relating, both intellectually and emotionally, with cultural objects that they encounter in the museum. Object-focused interpretive tools are conceived on the assumption that the target cultural content can be intrinsically engaging, if visitors are supported to perform interpretive acts that illuminate its significance to them. Such tools can also support more demanding participatory activities that invite visitors to contribute their own perspective to the museum narrative, both by easing visitors' reluctance to participate and by scaffolding the generation of more substantial content that is valuable to the institution and to other visitors.

Keywords: interpretive tools, visitor engagement, museum learning

Introduction

While visitor engagement has been a concern for museum professionals ever since museums have embraced their social and educational mission (Zeller,1989), the current technological landscape, especially the widespread use of networked mobile devices in conjunction with social media, has given new momentum to the ideal of a participatory museum that envisions visitors as cultural participants, who engage actively with the cultural objects, curatorial content and with each other; who appropriate cultural resources for personally meaningful activities; and, who contribute their own knowledge, responses and imaginative creations, thus enriching and renewing the extant curatorial narratives of museums, exhibitions and cultural heritage sites (Simon, 2010). This vision, however, is premised on what is probably an unrealistic expectation, namely, that visitors, when given the opportunity, will be spontaneously active, curious and creative. Efforts to realize this vision needs to take into account two concerns: (1) most visitors are generally reluctant to participate and remain "consumers" of cultural content (Proctor, 2012) and (2) participatory activities staged by museums often lead only to superficial engagement with the cultural objects and generation of rather trivial content on behalf of the visitors (Simon, 2010).

A plausible explanation is that the call for participation is at odds with visitors' sense of inadequacy with respect to their ability to understand and respond to the cultural objects

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exhibited, resulting in museum experiences that are cursory, uncomfortable and unsatisfactory. In considering the potential of location-sensitive mobile applications to address this problem, the two options for conceivable designs appear to be either the didactic delivery model of the guided tour or the playful learning model of the game (e.g. Schroyen et al. 2009). In the first case, the focus on building visitor confidence by providing information from a curatorial perspective, neglects visitors' interest and motivation. In the second case, the focus on boosting the visitors' sense of confidence through an exciting activity in the museum space, risks trivializing the interaction with the cultural objects.

In this paper, a third option is explored. Specifically, I propose that location-sensitive mobile applications are ideally suited for providing visitors with appropriate interpretive tools to develop their confidence in relating, both intellectually and emotionally, with specific cultural objects that they encounter.

The idea of software-based interpretive tools in the museum spaces is not new. Indeed Worts (1989), after noting the visitor's sense of inadequacy in art galleries, describes deploying computers to make available *"object-focused interpretive devices"* (p.107) that *"use the computer as a catalyst ... to stimulate interaction between visitors and art objects"* (p. 95-96). His designs attempt to combine validating the visitors' personal responses to the artworks with inducing visitors to grasp for themselves the authoritative curatorial perspective that places each object into a broader context. He emphasizes that unlike interpretive devices based on conveying information – such as wall panels and extended labels – software programs can be designed specifically to invite the visitor into a dialogue with the object.

It was a very ambitious idea, somewhat hampered by the cumbersome appearance and the limited capabilities of the stand-alone computers of the day. Thus, over the years, instances implementing this idea can be found only occasionally and not in the galleries, but in educational multimedia titles and web sites produced by museums (e.g. Silberstein-Storfer, 1996, Tiverton Museum & the University of Exeter 2003), providing valuable, albeit few, exemplars. I propose that with the current technological possibilities, the idea of object-focused interpretive tools in the museums can reach its full potential.

Object-Focused Interpretive Tools

Material objects seem deceptively accessible in their concreteness. However, when visitors enter into a dialog with an exhibit –and with each other about the exhibit – they need to bring to bear considerable cultural resources. Even the seemingly trivial act of naming a familiar object involves a cognitive act of recognition, which carries tacit knowledge and therefore contributes cultural content beyond the actual presence of the object. This becomes apparent when recognition is frustrated, for example, when the object is fragmentary or unfamiliar; then the respective content remains unavailable, though the object itself is actually present. Similarly, producing a description for an object does not correspond directly to the material or formal properties of the object, but depends on what the observers are able to see, which involves general skills and dispositions such as sustaining focus, observing details exhaustively and recording observations in precise and elaborate vocabulary, but also depends on expertise, such as extant background knowledge and prior experience that induce the observer to recognize certain details as significant, whereas *"through lack of recognition... potentially informative items remain unknown even if they are readily available"*(Shelley, 1996, p.280).

Further, the cultural content that becomes available in the course of the museum visit depends, not only on what visitors *can* gather about the objects, but also on what they *choose*

to register for themselves and others, in other words how much they choose to engage with any particular object. Therefore, the cultural content of the museum experience does not reside in the exhibited objects themselves, but is cognitively and discursively constituted by the visitors through acts of interpretation.

Object-focused interpretive tools can provide stimuli and structures for interpretive acts that are congruent with the authoritative curatorial perspective about the significance of each cultural object, but remain open -ended, because they do not prescribe the outcome of the visitor interpretation. Such tools can be implemented as location-sensitive mobile applications that are associated with specific objects or areas in the exhibition space. The purpose of these applications is to foster substantive engagement, deep understanding and personal signification of the targeted cultural objects.

There are several models of object study, each codifying a comprehensive process of interpretation (see Pearce 1992; 1994), that can inform the design of object-focused interpretive tools. Most models share two key characteristics. First, they begin with the primacy of the object and prescribe processes of disciplined description, which they complement with processes of inference, comparison and contextualization, in order to build an interpretation. Second, through the delineation of these processes, they negotiate a balance between inviting personal interpretive intuitions and situating the interpretation within established knowledge and conceptual frameworks. The multiplicity of models is due to their being developed for approaching different kinds of objects (e.g. representational art as contrasted to everyday material objects), for different interpretive purposes (e.g. using material objects as historical evidence as contrasted to studying them in order to understand design or visual composition) and, therefore, ascribing the objects with different kinds of significance (e.g. functional, symbolic, historic). Some of these models constitute more procedural while others more conceptual prescriptions for the interpretive process. Thus, they offer a host of options for developing interpretive tools tailored to particular objects and exhibits.

However, two caveats are in order. First, rigid prescriptive supports can transform even the most imaginative design for active interpretation into a rote process (Hopper-Greenhill 1994). Second, in the museum setting, the available interpretive tools need to be conceptualized as optional, and therefore need to be designed so as to accommodate varied levels of visitor time commitment and depth of exploration. Thus, a complex suite of interpretive tool may enable visitors to construct object interpretations by scaffolding detailed observation and careful inference, providing comparative objects and textual sources, invoking personal knowledge and introducing relevant themes. Such a suite of tools defines an involved process of sustained inquiry to be pursued in the gallery, either as an individual or as a dialogic activity. On the other hand, isolated tools from this suite would probably be used opportunistically by visitors who seek merely some entry points to stimulate their interest in the exhibit or some triggers for thought that expand their initial perceptions.

Even fairly simple interpretive tools can be very effective at stimulating substantive engagement, such as textual prompts for observation and interpretation that direct the visitor attention to significant details or pose questions about the cultural object to explore and discuss. For example, an interpretive tool may consist of a series of hints that engage the visitor in trying to figure out the function and use of an unfamiliar object.

Beyond textual prompts, annotated contextual connections to images showing important details of the targeted object, as well as to comparative images of other objects – including objects from the museum collection that are not on display, objects from other digitally

available collections and familiar everyday objects and images – and can encourage visitors in to approach objects and images more purposefully as visual evidence. For example, an unfamiliar object can be associated with images of scenes that contain similar objects in use or present-day equivalents. In some occasions it will be necessary to provide some contextualizing authoritative content, for the visitors to feel grounded and comfortable in attempting their interpretation. However, it is important that the content is designed carefully so as to be actionable, functional and relevant to the visitors' quest to produce their own understanding through open-ended, object-focused acts of interpretation.

Other varieties of interpretive tools may be designed to invite and validate acts of more creative and imaginative personal signification of the objects. Tools for recording voice annotations, for linking among objects and between objects and other images, for attaching 'taglines' or 'soundtracks' to objects or for manipulating digital copies of objects are examples of some of the possibilities. It should be noted that these more informal and idiosyncratic interpretive acts are not mere diversions irrelevant to the curatorial conceptions of significance. For example, in an art museum, they can induce visitors' attunement to several aspects of theme and style, albeit perceptually and intuitively rather than intellectually.

Further, as I discuss next, such tools can be applied to encourage and support a more participatory culture among museum visitors.

Object-Focused Interpretive Tools and the Participatory Museum

It is probably easy to envision solitary museum visitors focusing on a particular object and then using their mobile devices to access interpretive tools that they expect can enhance their ability to examine it and respond to it. It is less obvious that such tools may support a participatory culture.

Indeed, interactive interpretive devices installed in the exhibition space have been shown to be in conflict with the social experience of the museum visit, as they are usually designed for a single user (Heath C. & vom Lehn D.2002). Especially hand-held devices, with earphones and a screen too small to share, may even deteriorate the social atmosphere in the galleries, not only by isolating their users but also by depriving other visitors from opportunities for peripheral participation in the visible activity and focus of those around them (vom Lehn & Heath 2003). Therefore, it is important that interpretive tools such as the ones described in the previous section are designed taking into consideration the trade-offs involved in keeping the object, rather than the device, at the focus of their users' attention and visible activity. Object-focused interpretive tools can then stimulate social interaction and discussion among visitors, especially visitors who share the same tools on their devices.

Further, object-focused interpretive tools can support more demanding participatory activities that invite visitors to contribute their own perspective to the museum narrative, both by easing visitors' reluctance to participate and by scaffolding the generation of more substantial content that is valuable to the institution and to other visitors. An illuminating example of such an activity is given by Proctor (2012), who describes a scaffolded crowdsourcing project where visitors at the Smithsonian are asked to record on mobile devices object descriptions for use by visually-impaired audiences. This is an exemplar of how participant contributions can become part of the evolving museum narrative: visitor voices can be integrated with the curatorial voices to create more multivoiced interpretive material that can be tailored to specific audiences.

Similarly, object-focused interpretive tools can serve in laying the groundwork for visitor generated museum narratives. Visitors can use their mobile devices for creating a trail through the museum for other visitors to follow, by selecting objects and annotating them with soundtrack, links and commentary. These trails may even be incorporated into a structure such as a story, a virtual exhibit or a game (e.g. Yiannoutsou, Sintoris & Avouris 2011, Fisher & Twiss-Garrity 2007).

Besides producing value for the institution and cultivating the social dimension of the museum visit, such participatory activities may also serve the purposes of learning in the museum far better than contrived educational activities, which, however well-designed and imaginative, risk appearing trivial or condescending to visitors (Simon 2010). Participatory activities are also a more genuine embodiment of learning as knowledge construction, which has as at its essence the experience of producing new cultural content that is of real value to someone (Bereiter 2002). However, visitors need structured platforms if they are to contribute meaningfully (Simon 2010) and this is what object-focused interpretive tools can provide.

Conclusion

In this paper I have advocated conceiving of designs for location-sensitive mobile applications that encourage visitor engagement in museums by supporting acts of interpretation. Such designs present a good match to available technical functionalities, but are in many ways simpler and more modest that many other possible directions. They are also considerably more flexible as they involve open-ended tools that can be used to support diverse visitor goals and visit scenarios, from casual solitary visits, to educational programs to sustained participatory activities.

More importantly, however, the case for object-focused interpretive tools is premised on the conviction that the target cultural content is intrinsically engaging and that the museum visit is a unique kind of cultural experience. The idea of object-focused interpretive tools is banking on location-sensitive mobile applications not as contrivances for luring visitors into paying attention, but rather as means for supporting visitors to illuminate for themselves the significance of each cultural object they encounter in the museum, while simultaneously validating their personal response and creativity.

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