DIGITAL TECHNOLOGY AND THE MUSEUM EXPERIENCE: A CASE STUDY OF THE NATIONAL MUSEUM OF SINGAPORE

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The emergence of digital and future technology in cultural spaces has created both an interesting challenge as well as an opportunity for museums and cultural institutions. Museums reside in the space where the historical and the contemporary converge. As custodians of a national collection, we aim to collect and conserve objects that are of significance, and that are reflective of a particular period or phase in a nation's collective history. Just as importantly, we have a mandate to bring to public awareness the relevance of the collection, in addition to the act of collecting. In both of these roles, we are now confronted with developments in digital and new media that necessitate an open and honest study of their impact on us.

This paper expands on the National Museum of Singapore's use of digital media as part of the latest revamp of our permanent galleries, and specifically elaborates on how audience experience was a core consideration in such an undertaking. It also explores how we employed technology in carefully calibrated interventions to enhance the visitors' focus on the objects, collections, and narrative.

Many Audiences, Multiple Connections

In celebration of the Golden Jubilee anniversary of Singapore's independence in 2015, the National Museum of Singapore embarked on a revamp of its permanent galleries, with the intention of updating the historical narrative, particularly of the post-independence period. The scope of the revamp included the former Singapore History Gallery, and what used to be the Living Galleries. These two gallery spaces were physically disconnected from each other, but had common threads in their narratives that needed to be connected and coherent.

It was evident from the start of the project that in the decade since the permanent galleries were opened to the public, audience behaviour and expectations had changed. When the Singapore History Gallery and the Living Galleries were developed in 2006, digital mobile technology and social media were in their infancy. Information and knowledge capture was the main motive for visitors to come to the museum – to learn about history, to pick up new knowledge, and to view objects and artefacts of interest. While these motivators have not changed, the expectations certainly have.

In a manner of speaking, museums now find themselves competing against the inexhaustible capacity of the internet in delivering knowledge and information. With the internet at one's fingertips, and the proliferation of social media as not just a tool but a way of life, the museum visit becomes not so much about merely accessing information, but about accessing the layers beyond that. Visitors to the museum today have an inherent need to engage with context and perspectives, and the desire to not just listen to stories, but to also experience them.

The challenge for the National Museum of Singapore is then to deliver a museum experience that is able to connect not just with our traditional audiences, but to also find common ground in how we engage with a new generation of visitors. The balance of scholarship and experience is often perceived as a tricky one to manage. Increasingly, for museums to reach out effectively to our audiences, it is necessary to be able to connect not just cognitively with a select audience, but to allow multiple connections to be made at different levels. In approaching this issue, our fundamental belief is that one does not come at the expense of the other.

A Museum that is Relevant to the Times

The National Museum of Singapore celebrates its 130th anniversary in 2017, and has had a rich and vibrant history that predates the formation of our nation. Throughout this varied institutional history, we have undergone many changes, but each iteration has essentially aimed to create relevance to its time and context through the scholarship, research, collection, and presentation of objects. What has subtly shifted is the means by which this is done – how are we creating that relevance and connection not only with our mission, but with our audiences? A museum is not only a custodian of a collection, but a custodian of a collection for a purpose.

Where the earlier incarnation of the Singapore History Gallery had guided the visitor experience entirely via an audio companion device, it presented a quandary for the museum as the experience became very much a solitary one. This was acceptable and even preferred back when museum-going was conceived as a very scholarly and academic activity, where the objective was to learn and be educated in a subject matter. While that is still central to what the museum does, there are also other objectives that the traditionalist approach does not consider.

In understanding this, a deliberate strategy that we adopted for the 2015 revamp was to reconsider the impact that digital media and technological developments have had on society at large, and in so doing, approach the considered use of such digital media to aid the visitors' understanding of the narrative in a way that the object, in itself, may not be able to. We also recognised that the experience of museum-going has shifted from a personal one to a social activity, and aimed to bring our visitors through a range of emotions that can start from moments of quiet self-reflection and culminate in passionate exchanges of stories and memories.

Experience our Stories

Digital and future technology can be seen as tools to enhance learning and understanding of objects and collections. We sought to do this by introducing digital projections and interactive technology to facilitate our visitors' journey through the galleries, and at the same time, ensuring that the object remains central in this process. In essence, present and future technology present an opportunity for museums to create greater depth of understanding and perception of the object and the collection.

The introduction of digital interventions was thus carefully considered, with the approach that such enhancements should serve the purpose of adding layers, texture and content, but not to lead and overwhelm the experience. Effort was taken to ensure that visitors from tech-savvy millennials to 80-year-old veterans have a choice as to how much additional information they wish to access and how they choose to experience our stories.

The introduction of the digital "timeline kiosks" serves this purpose, where additional content is made available at strategic points throughout the gallery to help visitors make connections between historical events and their experience of the gallery. To this effect, we also worked with the Singapore Memory Project to incorporate personal memories captured in video and audio at the various multimedia kiosks. In these instances, technology and digital media were used to lead visitors away from the larger

and sometimes overwhelming narrative of our seven hundred years of history, to a personal and directly relatable exchange. This approach encourages visitors to connect with the stories that they encounter, promotes the exchange of stories among visitors, and – hopefully – the curiosity to delve deeper into their own personal and family experiences. In this revamp, we leveraged on digital media to provoke discussions and encourage our visitors to continue the museum experience even after they leave the building.

Digital as a contemporary "language" is also an interesting aspect to be explored, particularly in the "modern" Singapore section of the gallery, where the presentation of recent history is often problematic as history is still being written and narratives are constantly being updated as and when new information presents itself. We thus chose to incorporate *GoHead/ GoStan: Panorama Singapura*, a digital artwork by local contemporary artists Brandon Tay and
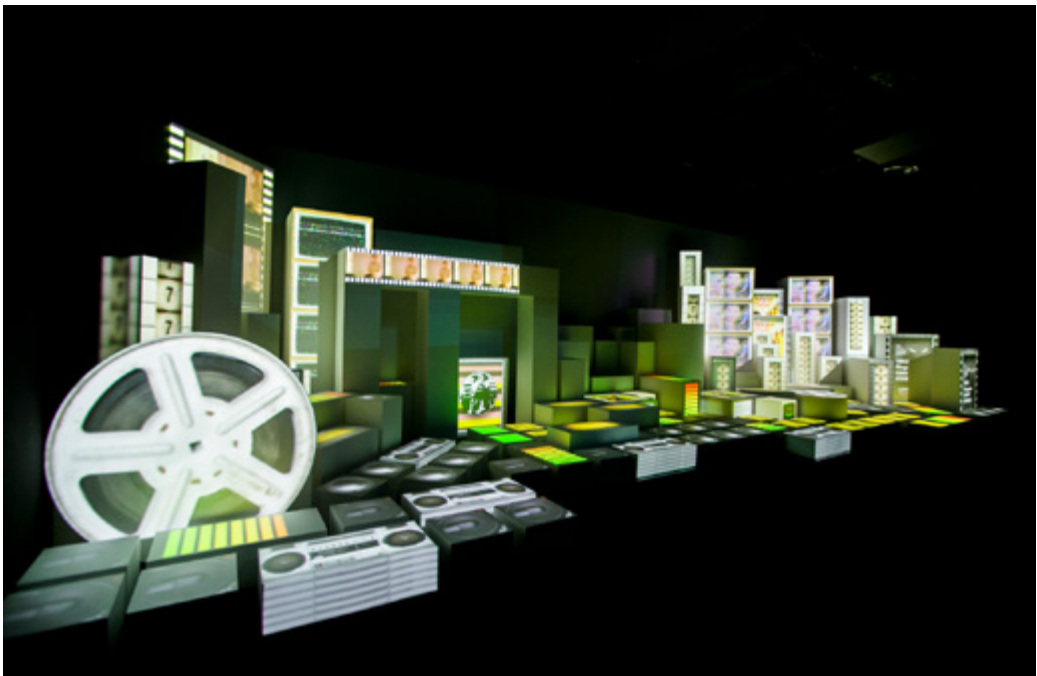
GoHead/GoStan: Panorama Singapura (2015).
Image courtesy of the National Museum of Singapore, National Heritage Board.

Safuan Johari, to provide a connection with the past through a perspective of the present. While the common axiom states that the past informs the present, we have also chosen to allow the present to inform our understanding of the past – a bold and unconventional approach for any history-based museum.

In seeking to extend the relevance of the museum beyond its walls, we also encourage our visitors to leave behind an imprint, memory, or thought in the last section of the gallery through our "Global City" interactive. This wide-angled digital projection that visitors encounter before they leave the Singapore History Gallery presents real-time "live" data of current-day reality and developments. These thoughts and memories will be compiled and re-presented as a living, growing pool of collective reflections and experiences. This intersection between big data and personal reflections will provide yet another interesting counterpoint in the understanding of our shared history.

Breathing New Life into a Collection

As society continues to change, we have to consider how the museum can still remain relevant over the next 50 years and more. For a museum of collections, a principal issue that we must address is the challenge of collections and collecting – *what* do we collect, and *how* can we best present what we have collected? On this basis, the object – and by extension, the collection – is always central and forms the basis of any strategy or approach. But at the same time, technology also presents a conundrum for museums of collections, as it leads to the issue of technology potentially rendering collections as obsolete. Three-dimensional (3D) hyper-realistic modelling, 3D printing, augmented and enhanced reality are all technologies that have wonderful possibilities, but also potentially threaten the perception of an object's value. If one can learn more about an object or collection from an immersive augmented reality experience, what incremental value is there in

"Global City" Interactive (2015).
Image courtesy of the National Museum of Singapore, National Heritage Board.
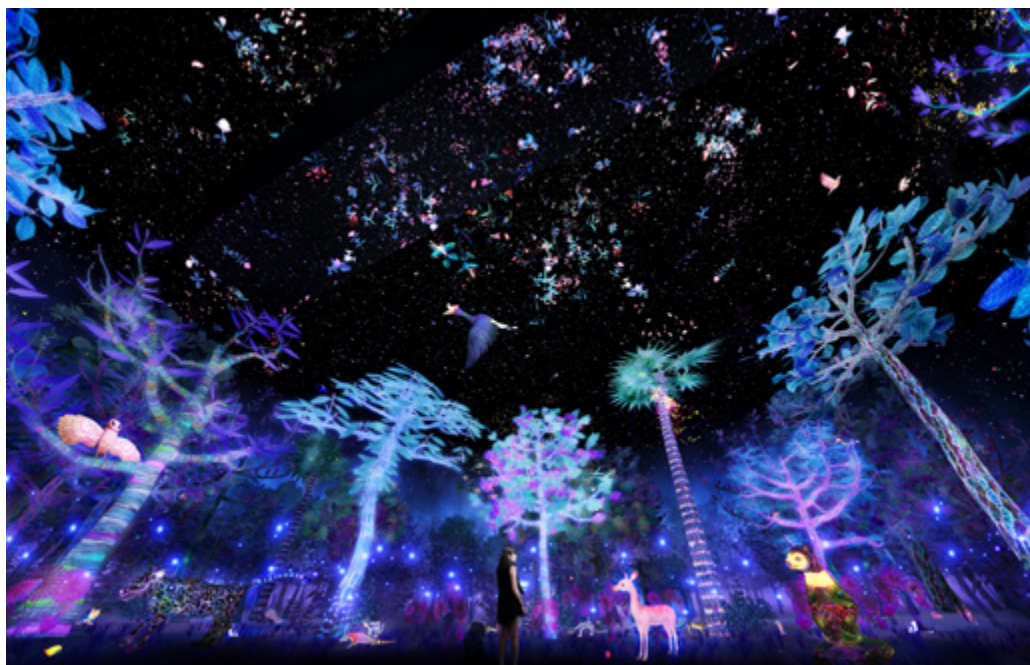
Story of the Forest (2016).
Image courtesy of the National Museum of Singapore, National Heritage Board.

visitors viewing the real object, which is often encased and made unapproachable, ironically by the very demands necessary to preserve and conserve the object for perpetuity?

Our exploration of this idea of breathing new life into a collection can most evidently be seen from the installation, *Story of the Forest*, that the museum worked on with multidisciplinary digital art collective, teamLab, to re-present our treasured two hundred year-old William Farquhar Collection of Natural History Drawings. For conservation and practical reasons, the original collection is displayed under strict conditions that limit its presentation and potential to connect with audiences at different levels. The aim of using digital immersive technology to create an artistic re-presentation of the collection was to highlight and create greater awareness of this prized collection, rather than to supplant it. The actual collection is displayed in the Goh Seng Choo Gallery,

and in *Story of the Forest* in the form of a digital artwork, as well as in a tactile analogue-driven interactive exhibit, *Second Nature*. This clearly places the collection in the forefront, and the various forms of presentation, be it digital or otherwise, allow us to reach audiences in ways not limited by the physical objects alone. This approach also informs the other digital interventions within our permanent galleries, where the collection remains the key focus.

Digital and the Object

A broader consideration that museums face regarding digital technology and objects is how to collect digital and virtual "objects". Digital photography, social media, emails, e-transactions, e-currency, and even digital games – things that collecting institutions have traditionally collected in the form of letters, prints, paper, and traditional games – present a challenge in how "objects" are defined, and critically, how museums and

Goh Seng Choo Gallery (2015).
Image courtesy of the National Museum of Singapore, National Heritage Board.

Second Nature (2016).
Image courtesy of the National Museum of Singapore, National Heritage Board.

Gallery10 (2017).
Image courtesy of the National Museum of Singapore, National Heritage Board.

institutions should collect and preserve memories and history that are increasingly transacted in today's new media space.

This is a challenge that we have to meet and plan for ahead of time, lest we be very quickly left behind. The National Museum of Singapore has thus opened Gallery10, a new space dedicated to the presentation of digital works. This experimental space allows us to familiarise ourselves with the medium, and to explore the intricacies of dealing with new media and digital forms. It also allows the museum to explore a balance between the tangible and intangible, the real and virtual, and most importantly, to work with people and partners who straddle both forms on a daily basis. In today's world, the digital is the object, and the impetus for us

as a museum is to identify how we can harness these new developments and remain relevant for future generations to come.

Conclusion

In addressing the various challenges that digital technology brings to our reality, it is our belief that such technology does not work in opposition to what we advocate. Instead, it is both necessary and natural as technology progresses and new forms take precedence over old methods. Each institution and museum will need to identify its core purpose, and to come to terms with how, rather than if, digital technology has a role to play in the future. Cultural spaces have always exhibited confidence in challenging notions of permanence, and will undoubtedly be well-equipped to embrace this shift in our understanding of the digital and the object.