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REIMAGINING PLACE: PARTICIPATORY ART IN THE DIGITAL RECONSTRUCTION OF KAJANG'S OLD TOWN

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Abstract:

This paper presents an artistic research project aimed at digitally archiving and preserving the memories of Kajang's old town through the lens of participatory art and technology. Through collaboration with students from a local university, the project engaged participants in the recreation of specific buildings within the old town, driven by their personal connections and nostalgic reflections. Participatory observation is used as the methodology to gain diverse perspectives and motivations while the memories provide insights into the significance of each chosen building through exploration of Kajang's cultural identity. Using 3D modelling method, participants built and contribute digital 3D models of the building and completed models are made available for viewing worldwide by offering the public access to the virtual reconstruction through an immersive digital platform. This paper describes the process of digital reconstruction and significance of participatory art in preserving and celebrating the collective memory of a community. It underscores the potential of interdisciplinary efforts, and it aspires to be an example where participatory art challenges dominant narratives through the creation of alternative realities.

Keywords:

Archiving and Memories, Artistic Research, Digital Reconstruction, Kajang Town, Participatory Art.

Introduction

The genesis of this artistic research project started from a curiosity about the interplay between memories, space and technology, particularly within the context of reconstructing and reimagining a specific place – the old Kajang town. I envisioned my project as a multidimensional exploration that interlaces artistic expression, technological innovation and community engagement.



This study describes the creation of a virtual art exhibition. The exhibition presents a collection of crafted digital 3D models of historical buildings, accompanied by artistic research, to showcase the essence of the old Kajang town. This project involves different group of participants consisting of students from a local university, alongside my personal contributions. The works shall offer an artistic impression that captures the spirit and nostalgia, rooted in the personal memories and lived experiences of Kajang residents. I aspire to provide a platform for artistic and creative expression through the medium of digital art and preserve the memories of the old Kajang town through accessible digital interactive archives of 3D models that evolve over time with a continuously engaging experience. To achieve this, I organized series of workshops aimed at equipping participants with essential skills in 3D modeling, cultivating a hands-on understanding of digital reconstruction techniques.

Buildings to be reconstructed are selected from a specific area within the old town. Known as Section 1, this area covers a less than 1 kilometre radius, and it was the oldest section where the first development of the town by the British colonial government took place.



Figure 1: Original Map of Section 1, Kajang old town

Source: Kajang Heritage Centre

Literature Review

Kajang Town

Kajang town is located in the heart of Hulu Langat district in the south-eastern part of the state of Selangor, Malaysia. Although small, Kajang town has its own unique and interesting narratives in terms of its history and built heritage. In the early establishment of Kajang town between 1898 to 1917, when the first batch of brick shophouses were built, unique Hakka construction method was used by workers of the Kah Yin Hakka dialect group. The township



is teeming with unique characteristics of the dialect group who differ from other Chinese residing in other parts of Hulu Langat who are of the Fui Chiu Hakka dialect group (Teng & Shukri, 2017). This is one of the rare places in the country where you can find houses featuring the Hakka Earthen Wall - a wall made of earth, sand and bamboo and is a whopping l meter-thick. (Teng & Shukri, 2017). Through historical accounts, the atmosphere of the town during its early days of establishment seems to be prosperous. Businesses are thriving due to the tin mining and rubber industry and life seems peaceful under the colonial law and order.

It was not until the end of the war, the increased stresses in inter-communal relations happened. These simmering tensions would boil over in Kajang in the period of political vacuum that followed the Japanese surrender and before the British were able to reassert their authority. (Barber & Aun, 2012). The rise of Communism with an end goal to liberate Malaya from British rule, and to restore the dominance of the Malay over the Chinese have led to series of racial clashes in Kajang. Between 1945 after the surrender until the beginning of the Emergency period in 1948, in and around Kajang, security forces struggled to prevent serious inter-racial clashes and lynch mobs taking revenge on 'puppet' policemen and collaborators (Barber & Aun, 2012).

The old town of Kajang have established communities that are part of its identity. Kajang is a quintessential small Malayan town. A representative of a key component in the colonial machine - the local junior official who carried out at a grass-roots level the policies of the British administration described Kajang town as the perfect example of how a pre-war Malayan colonial town should look (Barber & Aun, 2012). On a more personal view, in this research, I see Kajang as a place. A place which is more than a location. A location that is meaningful in some way. Sense of place commonly describes the unique human experience, bonding and emotion towards a particular place (Ghani, et al, 2016). Places are both culturally and phenomenologically dynamic with time, determining the experience of a place which is a gestalt of an individual's sensory impressions of and cognitive engagement with the sights, the sounds, the smells of the physical environment and its inhabitants (Devine, 2016).

Archiving, Memories and Artistic Practice

In the realm of art, the act of archiving transcends mere documentation; it becomes a vessel through which memories are preserved, reinterpreted, and reimagined. It is evident that contemporary artists have used, critiqued and re-interpreted existing archives, as well as become archivists themselves - making new archives as alternative or counter-archives or create personal collections that reference the archive as a repository of memory and knowledge (Boscacci, 2015). Archiving, an act of preservation and organization, a systematic process designed to safeguard the transient against the ravages of time, when aligned with artistic practice, evolves into a dynamic form of expression and reflection. Artists, as caretakers of memory, utilize various mediums including digital art and multimedia installations to create works that resonate with emotional depth and intellectual curiosity. Memories, inherently subjective and often elusive, find solidity in artistic expression. The artist's space becomes a shelter where fragments of the past are pieced together, giving form to abstract recollections. This process is not merely nostalgic but is also a critical examination of how memories shape identity and influence present realities. By engaging with memories, artists question the reliability of recollection and highlight the fluidity of personal and collective histories.



In her essay, Carbone (2020) explored the intersection of contemporary art and archival practices, emphasizing how archives serve as spaces for memory and tools for creative interventions. She quoted Astrid Erll on the global fascination with memory and flourishing of memory practices that can be mainly attributed to three things (Erll, 2011). First, numerous historical transformations. Second, advancements in media technology, including increased data storage and the role of popular media such as period pictures and documentaries. Lastly, academic developments, particularly post-structuralism and postmodernism, which emphasize the constructed nature of the past and the end of grand narratives (Erll, 2011).

American multimedia artist Mona Smith (2007) questions western practices of memory by acknowledging the presence of Dakota peoples in public space through temporary multimedia installations and educational projects, including memory maps, community events, visitors encounter multi-sensual historical narratives, Dakota stories, environmental memories and landscape experiences. As Smith explains: 'Dakota remembers through land, experience and story. Dakota people know that everything passes away, so buildings and signage and memorials are not the traditional ways to honour, to mourn, to remember'(Till, 2008).

Today's situation demands post-modern interpretations of historical artifacts. These can draw inspiration from the originals but present them in new and thought-provoking ways. Merging artistic expression into an archiving project involves infusing creativity, interpretation and narrative into the preservation and presentation materials. By incorporating artistic elements, an archiving project can transcend mere historical simulation and become an intellectually and emotionally engaging multifaceted experience that invites interpretation, reflection, and connection. Instead of a straightforward display of artifacts, each artifact can be part of a larger narrative, merging historical facts with creative storytelling, making the past relevant and alive in new and meaningful ways.

Participatory Art Practice: A Paradigm Shift

Participatory Art has made its way into the contemporary scene at least since the Futurists and Surrealists era in the early 1900s. It is exemplified by movements such as Fluxus and Happenings (Literat, 2012). The rise of the internet and the opening up of media production in what (Jenkins et al. 2009) refer to as participatory culture, has in fact resulted in a tremendous burst of media created and shared online by willing but unpaid users. This democratizing principle has also been influential in the development of design thinking (Brown, 2008). I drew upon the tradition of participatory art projects such as "The Dinner Party"(1975) by Judy Chicago and "The Gates" (1979-2005) by Christo and Jeanne-Claude, which exemplify the power of art to create collective experiences and evoke collective memory. Additionally, I found inspiration in the innovative use of technology in art, in the realm of augmented reality, as seen in projects like "Rain Room" (2012) by Random International and "Monument Valley" (2014) by Ustwo games. Artists working under this model generally invoke three main motivations for the practice of participatory art: activation (by stimulating empowerment as well as individual and collective agency), authorship (or the cessation of authorship to make the artistic process more democratic and egalitarian), and community (via the restoration of lost or weakened social bonds) (Bishop, 2006).

In discussing participatory design, Taxén (2004) stated that participatory projects are rooted in a desire for change, often with respect to the way users are being involved in the design of new technology artefacts. In contributory projects, visitors are solicited to provide limited and



specified objects, actions, or ideas to an institutionally controlled process. In collaborative projects, visitors are invited to serve as active partners in the creation of institutional projects that are originated and ultimately controlled by the institution (Simon, 2010). In co-creative projects, community members work together with institutional staff members from the beginning to define the project's goals and to generate the program or exhibit based on community interests. (Simon, 2010). These levels of engagement correspond to different levels of audience's creative control on contents, ranging from "curatorial", to "interpretive", to "inventive", that may be transferred and applied to Simon's (2010) "contributory", "collaborative" and "co-creative" models of participation.

The convergence of technology and participatory art practice represents a dynamic and evolving field within contemporary art. Artists today harness the power of digital technologies to create immersive, participatory experiences that challenge traditional notions of art and reality. Nicolas Bourriaud's (2002) concept of "relational aesthetics" encapsulates this shift, emphasizing the importance of social interaction and communal experiences in contemporary art. The virtual world becomes a canvas for collaborative and participatory art, challenging traditional notions of authorship and spectatorship. The arrival of virtual reality (VR) technology has enabled artists to transport audiences into immersive virtual worlds. VR artworks such as Marina Abramović's "Rising" (2018) blur the boundaries between the virtual and the real, inviting participants to co-create their experiences within a simulated environment. These immersive experiences foster deeper connections between participants and the artwork (Abramović, 2018).

Artistic Research

Artistic Research emphasizes on the artistic practice, and the research component is embodied within the practice itself. It is a methodology that integrates artistic activities within either the research process or its outcomes (Thompson, 2020) and it requires subjective methods of presentation and evaluation. It helps to frame debates about the character, origin, and appropriateness of research in art disciplines within the academic setting (Macleod, et al, 2006). When artworks are produced as part of artistic research, they function as both the medium and the message, capturing the essence of artistic exploration and innovation. Artistic research combines art-making and word-making, reflecting constructivist thinking, which blends theory and practice. This approach requires a mature understanding from both the research and artistic sides. Critical contexts in artistic research encourage a deeper interpretation of artistic works and contribute to understanding the research's theoretical and practical dimensions. Djahwasi & Saidon (2020) positioned two models of artistic research; 1) Artistic as Research and; 2) Artistic as Method. Artistic as Research is to express artistic practice, where research strategy (methodology) is carried out through practice. In Artistic as Method, the method is considered as research finding in which processes and artistic works can be understood as an answer to the research questions (Djahwasi, & Saidon, 2020).



Figure 2: Djahwasi, & Saidon (2020). Framework of Artistic as Method.

In Artistic as Method, the method is considered as research finding in which processes and artistic works can be understood as an answer to the research questions (Djahwasi, & Saidon, 2020). It refers to the use of artistic processes as research tools or methods, emphasizing that these should not be viewed in the same way as conventional research methods. Its notion promotes an accountable reporting system that balances theory and practice, along with reflection and documentation of practice. The criteria for assessment in this paradigm include setting learning goals, developing strategies to achieve these goals, identifying and addressing problem areas, selecting relevant resources, and self-assessment. Artistic as Method places artistic processes and works as central components of research findings, emphasizing authentic participation, data creation, and the iterative nature of artistic production. "Data characteristics in artistic practice comes from data-creation not data collection". (Djahwasi, & Saidon, 2020).

Participatory Observation

A participatory case study in the context of Artistic Research is an approach that involves collaboration between researchers and participants to explore and create knowledge through the process of artistic practice. I used participatory observation as the method to collect and create data from this project. Stokrocki (1997) explained that participatory observation as multi-person, multi-method, multi-conceptual, and multidimensional. My approach included observations of group interaction conducted through open sessions, interviews, and the use of artistic outputs as data. In this research, I was the observer as well as the instructor and participant in the planned workshops.

Implementation

This project spanned for three years, involving digital animation students from Universiti Tunku Abdul Rahman (UTAR) participating in series of workshop conducted every year. The workshops were done in an iterative manner. Each iteration involves different group of participants from various batches, with most of them are beginners with minimal knowledge of 3D content creation. The process goes across research, idea development, and 3D modeling. The level of participation and the number of participants depend largely on their engagement and willingness to contribute their perspectives to the research. Based on this, the participants were categorized as "contributor", "collaborator" and "co-creator" based on Simon's (2010) models of participation. Through this method, every batch of participants became a case study.



Archiving

Initially, the participants embarked on a field walk to observe the local community and environment, focusing on the streetscapes of Kajang old town which were documented through photographs and sketches. They engaged with residents to gather stories, photographs, and personal memories related to the old Kajang town to enrich the research with diverse and authentic community narratives. This preliminary step laid the foundation for developing a visual essay that correlated with memories and nostalgia. The Kajang Heritage Centre, a local town museum/gallery, played a role by providing consultations and facilitating group discussions. Some of these activities were integrated into the students' class exercises and assignments. Data collection methods at this stage included interviews to gain in-depth insights from participants about their experiences and perspectives. Information was also derived from existing artefacts in the museum, drawings and descriptions in books.



Figure 3: Participants' visit to Kajang Heritage Centre



Figure 4: Field Work in the Kajang old town



Artistic Workshop

After the documentation phase, impression sketches were produced with each of them contributing to the idea development and refinement of the final artwork. Through impression sketches, participants were able to conduct conceptual exploration while capturing spontaneity. The data gathered earlier during interviews, observations, and reminiscences were instrumental in evoking memories that informed these sketches. Discussions about design principles such as space, scale, colors and textures were held to ensure the visual elements echoed both personal and collective memories. By relating these memories to visual design, the sketches aimed to capture and represent the nuanced emotional and historical context shared by the participants.



Figure 5: One Of The Initial Sketches Produced By Participants.

The 3D workshop came after the completion of visual development. The workshops were held online with a timeline of approximately 10 weeks for every group of participants. Through online sessions, I was able to record conversations and discussions between participants and conduct observations. 3D modelling is a process of turning fictional or real-life objects into digital rendition versions of said objects (Le, 2022). For this project, I utilized Autodesk Maya software; an industry-standard tool and available for free for participants under educational license. For the modeling workflow process, I used Pumagualle, et al (2023) proposed method. Maya can perform mass instancing to build cities and massive cinematic scene and the suite of materials, masks, generators, and smart material, brings color and texture to models. (Le, 2022). The software works by providing a set of primitive shapes that can be used to build up a more complex shape, which in turn can be sculpted to get the more nuanced details of curves and angles (Wood, 2012). Through random interviews, participants characterized the software's possibilities as "beneficial," allowing them to " build anything they can dream up." Among other main exploration in the 3D workshops are of the modern-day 3D processes called "Physical-base rendering" (abbreviated as PBR) and "Normal map baking" (also known as 3D baking) work (Le, 2022). Another sub-process and theory about "Subdivision" that comes along with normal map baking were also explored (Le, 2022).



Modeling	Lightning	Textured	Render
3 3		Configuration of the Hypershade using Arnold materials, Standard Surface.	1 10 0

Table 1: Modeling Workflow in Autodesk Maya. (Pumagualle, et al, 2023).



Figure 6: Screenshot Of A Row Of Shophouse Modelled In Autodesk Maya

The artworks created during the study serve as a form of data, providing material for analysis and reflection. In this case, artistic outputs are the finished rendered 3D models of the chosen buildings. The completed 3D models went through narrative analysis to understand the stories and experiences shared by participants and artistic analysis to interpret the artworks themselves as data, considering both their aesthetic qualities and the contexts of their creation.





Figure 7: Compilation Of Some Of The Rendered 3D Models Of Old Buildings In Kajang Town.



Figure 8: Screenshot Of Artsteps Exhibition's Virtual Space.

Dissemination and Future Directions

The findings are shared not only through academic channels but also through public exhibitions and community events. The exhibition is accessible through: https://www.artsteps.com/view/657940e93fd67fa5d472fd73

I utilized the Artsteps application as the first virtual platform to exhibit the works produced in this project. Artsteps is a browser-based platform that uses Unity tools to allow users to build



and share their virtual environments. Features include The Ability to Design 3D Environments and integrate Digital Content, including images, audio, video, and 3D objects. The app provides a few existing galleries, but a particular one has been structured according to the suitability of this exhibition (Shaari, et al, 2022). Through this application, the exhibition could get viewers from all over the world without constraints. (Shaari, et al, 2022).

Besides that, it also provides the advantage for the viewers to read through the written story whenever they click on the image (Shaari, et al, 2022). Future directions involve exploring alternative formats for exhibiting the digital archive, such as augmented or virtual reality installations. Local community engagement is crucial for the sustainability and impact of the project. Through exhibitions, workshops, and public talks, residents of Kajang town will have the opportunity to interact with the digital 3D archive of old buildings in their locality.

Looking ahead, several avenues for future research and development may emerge from this project. Firstly, longitudinal studies could assess the long-term impact of the participatory art project on local communities, including changes in attitudes towards heritage conservation and urban development. Secondly, comparative analyses with similar initiatives in other cultural contexts could provide valuable insights into the efficacy of participatory methodologies in diverse settings. Additionally, advancements in digital technologies, such as 3D scanning and virtual reality, offer opportunities for expanding the scope and scale of the project to encompass broader geographical areas or thematic focuses.

Limitations and Future Research.

While the study aimed for an inclusive community involvement, engaging a diverse demographic proved to be challenging. Factors such as varying levels of digital literacy and differing perceptions of heritage significance led to uneven participation, which may have resulted in a less comprehensive portrayal of the community's cultural landscape. Besides that, the project was constrained by limited financial and human resources. These constraints impacted the scope of the study by limiting the number of sites that could be digitally reconstructed. Future studies may investigate the long-term impact of digital heritage projects on community identity using longitudinal methods to assess changes over time.

Conclusion

This study explored the intersection of participatory art and digital archiving through the development of a 3D digital archive of Kajang town's historical buildings, culminating in a virtual exhibition. Employing a participatory case study approach within the framework of artistic research, this project nurtured a collaborative environment that emphasized the enhancement of digital literacy.

The objectives of the paper are achieved through the participatory nature of the project which proved to be helpful in achieving several key outcomes. Firstly, it allowed participants to become co-creators, enhancing their sense of ownership and investment in the preservation of local heritage. This engagement also provided a valuable educational experience, equipping participants with skills in 3D modeling, digital archiving, and virtual exhibition curation. The project highlighted the potential of digital tools in the preservation and dissemination of collective and personal memories. The implementation of a virtual exhibition as a culmination of the project underscores the transformative potential of digital platforms in making cultural heritage accessible and engaging. Future research could expand on this work by exploring

additional participatory models and technological innovations, further bridging the gap between communities and their cultural histories.

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