Project Kampong Lorong Buangkok — Singapore Mainland's Last Rural Village

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Abstract—Social sustainability is an increasingly important concept in urban development and renewal. Other than looking at preserving the greenery, ecosystems, and physical environment, urban scientists are also looking at ensuring the conservation of social capitals, social cohesion and the general well-being of people involved. There is keen interest in capturing the multi-sensory experience of individuals as they interpret what they sense or recall, what they interpret of their surrounding environments, landscapes and experience, and at the same time, improve the process of harvesting, processing and disseminating this information. In addition, with increasing demand for public participation in the process of urban conservation and planning, and heritage conservation, social sustainability and sustainable urban redevelopment cannot be achieved without the involvement of communities and individuals. In Singapore, Kampong Lorong Buangkok is the last remaining village or *kampong* on the mainland. It has come under threat of having to make way for urban redevelopment as indicated in the Urban Redevelopment Authority (URA) Masterplan 2014. In its place, the kampong is supposed to be replaced by a 3-lane bi-directional highway, 2 schools (primary and secondary), and a public park. There is thus a need to capture and document as much information and history about the kampong before it eventually makes way for urban redevelopment. This paper provides an overview of a planned project to capture the rich oral history accounts and heritage information about the kampong and its people before the kampong is lost to gentrification and urban redevelopment.

Index Terms—Heritage preservation, historical anthropology, oral history, personal narratives, technology-enabled documentation

I. INTRODUCTION

Urban development and renewal, as well as gentrification, are inevitable processes that communities go through as cities develop and mature. Villages, natural landscapes, and wide open spaces tend to make way for urban and vertical development in the form of residential housing, commercial complexes, and high-rise buildings such as in Tokyo, Japan and Shanghai, China. However, urban development and gentrification have also created cities where both urban and rural areas exist side by side, such as Jakarta, Indonesia and Manila, Philippines.

Either way, rapid urban development and gentrification have posed several challenges to the character, identity, history and cultural heritage of cities [1]. More often than not, the character, identity, history and cultural heritage of cities, have traditionally been represented by physical artifacts such as monuments, landmarks, or historical buildings that have captured a period in history [2].

However, it has been increasingly accepted that the cultural heritage of cities and communities concerned are also important in defining the identity of that particular city and community [1]. This cultural heritage has evolved to include the social and cultural fabric, social capital, as well as the intangible aspects, of those cities and communities. These intangible aspects include place attachment, nostalgia and emotions such as grief, love and rage [3]; the well-being of people involved [4]; and social capital, social norms, and values contributing to social cohesion that are built over time through a shared understanding of acceptable practices of communal living [5], [6].

Hence, in determining the character, identity, history and cultural heritage of cities, personal narratives and oral history accounts by the residents who have lived in these cities over a period of many years or several generations, become increasingly important and invaluable sources of information to document, trace and verify the character, identity, history and cultural heritage of a particular city [7]. These cannot be documented by just taking photographs or other forms of visual capture of these cities for future generations to remember them by. Engaged discussions, interviews, observations, and ethnographic approaches are required to better capture these personal narratives and oral history accounts as accurately as possible [8].

II. ORAL HISTORY ACCOUNTS AND PERSONAL NARRATIVES

Oral history has been accepted to refer to "knowledge about the past that is relayed by word of mouth from one generation to the next," as well as "the practice of recording, archiving, and analyzing eyewitness testimony and life histories" [9]. While the description of what oral history is, would vary from one academic to another, oral historians have agreed that it is a "powerful tool to engage people in the discovery and making of history and in the critical assessment of how stories about the past are created." Historical narratives, which include peoples' voices about daily issues and struggles, serve a public pedagogical function that can be instrumental in enacting laws and policies, influencing the mass media, or in shaping societal norms and values.

Cultural and historical heritage is under constant threat of a multitude of factors such as natural hazards, vandalism, urban development and redevelopment, as well as ageing [10], and all of these affect their existence. There is thus a need to ensure that such cultural and historical heritage are well documented so that in the case of their eventual physical non-existence or loss, the documented information and recordings can be passed on to future generations and be used for reconstruction purposes, if needed.

However, it is recognized there is a wide spectrum of technologies that can be used and that ICT is a complex field, especially when applied in the area of cultural and historical heritage [11]. Hence, it is necessary to fully understand the potential uses and effects of integrating the different technologies in cultural and historical heritage documentation. Despite its challenges, Tucci and Bonora [11] asserted that "digital information and communications technologies (ICT) have produced a wide range of applications for collecting and processing historical data, documenting and monitoring the physical conservation of objects and monuments, visualizing historic structures and environments, and creating interactive information networks that can link professionals and scholars with students, museum-goers, and interested amateurs".

The integration of cultural and historical heritage with digital technologies has already shown the potential in enhancing the research, documentation, data management, and public involvement in the material remains of the past. Since the Digital Michaelangelo Project about two decades ago, the use of digital technologies in capturing the details and data of cultural heritage and historical arts, has evolved and allowed even more comprehensive and meticulous information of cultural and historical heritage and artifacts. Increasingly, three-dimensional (3D) scanning and modelling has paved the way for the reproduction of such cultural and historical heritage and artifacts for posterity [12].

In addition, it has been recognized that no single approach or digital technology is wholly responsive or can fully document the rich cultural or historical heritage information of any particular monument, location or project [10]. There is a need to draw on the experience and expertise of different professionals from the fields of ICT, culture and heritage, history, and social sciences, in order to capture and document the required and relevant information, and ensure the richness and usability of the data acquired. Hence, one way to minimize the potential technical risks faced by such a project that is meant to capture rich historical accounts and heritage information, is to involve a multi-disciplinary team with the relevant experience and expertise.

III. Kampong Lorong Buangkok

There are 63 islands in Singapore – sixty-two of which are small offshore islands, and one mainland. Kampong Lorong Buangkok is the last remaining rural village or *kampong* on mainland Singapore. It was first established in 1956 and is also known by the name *Kampong Selak Kain* (meaning to hitch one's skirt or sarong, as the kampong experienced frequent flash floods in the past). The kampong land of 1.22 hectares, was acquired by a traditional Chinese medicine man named Mr Sng Teow Hoon, in 1956 and started with only five or six families. Mr Sng and his daughter, Ms Sng Mui Hong, manage the kampong thereafter and Ms Sng is still living in the kampong to this day. Mr Sng passed away in 1997.

There are currently 25 families still living in the kampong (Fig. 1 and Fig. 2). While each family owns the wooden house they live in, they pay rent for the land on which their house stands. The monthly rent is paid to Ms Sng, and ranges from \$6.50 to \$30.00 [13]. The kampong is made up of both Chinese and Malay residents.

Fig.1. Entrance to Kampong Lorong Buangkok, with the owner (left, in photo).

Fig.2. Inside Kampong Lorong Buangkok.

Kampong Lorong Buangkok has come under threat of having to make way for urban redevelopment as indicated in the Singapore Urban Redevelopment Authority (URA) Masterplan 2014. In its place, the kampong is supposed to be replaced by a 3-lane bi-directional highway, 2 schools (primary and secondary), and a public park.

While urban redevelopment is inevitable, it is hoped that the kampong can be conserved for heritage, cultural and values education. An adjournment motion on *Preserving green spaces and heritage in Jalan Kayu constituency* was raised in parliament on 2 October 2017 by Dr Intan Azura Mokhtar, Member of Parliament for Ang Mo Kio Group Representation Constituency (Jalan Kayu), calling for the kampong to be preserved and integrated with urban life, instead of having to make way for urban redevelopment [14].

During that adjournment motion in parliament, although the Singapore government had given the assurance that URA would not touch the kampong for 'several decades', the kampong is not likely to be retained for eternity. It will eventually make way for urban redevelopment. Hence, it is a matter of 'when' and not 'if'. It is thus useful, and necessary, to capture and document as much information about the kampong, including the memories, experiences and perceptions of the residents who have lived there and are still living there, and preserve these as aural or audio-visual records and narratives for future generations, in terms of cultural, heritage, historical and values education for the future.

IV. PLANNED PROJECT OBJECTIVES AND DELIVERABLES

A project grant of S$150,000 (approximately USD$110,000) has been awarded by the Singapore Institute of Technology (SIT) to the author and Principal Investigator for Project Kampong Lorong Buangkok. The aim of this planned project is to capture the rich oral history accounts and heritage information about the kampong and its people before urban redevelopment and renewal or gentrification take over.

With the above motivation, this planned project seeks to achieve the following detailed objectives:

1) Compilation of oral history accounts by the residents still living in the kampong, who have seen changes in the kampong and its surrounding areas from pre-independence (1956) to present day, where such oral history accounts will be able to provide rich insights into the social changes that have happened in the kampong, a microcosm of multi-racial and multi-religious Singapore;

2) Production of a detailed 3-dimensional layout of the kampong, harnessing virtual and/or mixed reality (VR/MR) technologies, that can be captured and displayed on various technological platforms in the future, whether online or in exhibitions, community showcases or roadshows. This is particularly important in preserving the memory of the kampong when it eventually makes way for urban redevelopment;

3) Compilation of the above audio-visual, text-based and digital documentation will serve as a basis for cultural, heritage, historical and values education, and racial-religious understanding, among current and future generations of Singaporeans; and

4) Opportunities for students in the Singapore Institute of Technology (SIT) to be involved in an extensive social and community project that helps fulfil the fourth SIT-DNA of being 'Grounded in the Community'.

The deliverables for the planned project are:

1) A compilation of the oral history accounts of the residents (audio-visual video clips or documentaries, and text publications such as a coffee table book and information booklets);

2) A technology-based audio-visual documentation of the kampong, including a possible 3-D physical and digital/VR modelling of the layout of the kampong;

3) An online platform/website showcasing and documenting the oral history accounts, photographs, video footages, and 3D digital/VR modelling of the kampong; and

4) Campus-wide exhibition in SIT and community exhibitions (in community centers) showcasing the above deliverables for both SIT students and the general public to view and have access to the information collated.

V. MOVING AHEAD - PLANNED PROJECT APPROACH

To introduce and familiarize the project team faculty members and collaborators, as well as the student assistants, to the owner and residents of the kampong, two initial introductory visits were organized. One visit was organized in February 2019 for the faculty members and collaborators, and another visit was organized in April 2019 for the student assistants (Fig. 3). These visits were important for the project team members and student assistants to get to know the residents, understand their background and environment, and establish an initial relationship and eventual trust with them. These are particularly important when interviews with the residents of the kampong need to be carried out a few times, each time over a duration of a couple of hours, and each time probing into their lives and their past.

Fig. 3. The project team in the kampong.

When the student assistants carry out these interviews with the residents, there is tremendous learning value for them. They will learn about both the history of the kampong and of the nation, since the kampong was first established in 1956, which was nine years before the independence of Singapore. The residents, many of whom have lived in the kampong for more than five decades, would have seen through the numerous changes to the surroundings of the kampong (through urbanization and gentrification), and more significantly, would have experienced the many different national and social policies that have been introduced, which have changed over the course of half a century, and which have impacted them in more ways than one. In addition, the kampong itself is a testament of how multi-culturalism and multi-racialism have shaped the residential and living environment in Singapore - from the days of rural villages to that of current urban residential living defined by the housing-related Ethnic Integration Policy, which seeks to prevent ethnic residential enclaves from developing [15].

Hence, there is a lot of rich experience that the kampong residents can share with the students and other younger Singaporeans keen to gain insights into how Singapore has changed over the years, on many different social levels.

The student assistants will also be involved in the photography and videography of the kampong residents. In addition, from the photographs, videos and 3D-scanning data gathered, the students will generate a 3D physical model as well as a virtual model of the kampong. This will be done with the help of a local design company that specializes in 3D modelling and virtual modelling, and which has agreed to work with the project team as an industry collaborator. From the interview data collected, the student assistants will also be writing up the oral history

accounts for the eventual commemorative coffee table book to be published, and for the website that will be maintained to publicly share the oral history accounts and other outputs of this planned project.

Hence, for the student assistants, this project will provide ample opportunities for them to apply the skills and knowledge they have learnt in their respective university programs - be it in Communication Design, Software Engineering, or Interior Design.

In addition to conveying and sharing publicly the rich historical and heritage-driven data collected from the project, the project team also plans to carry out an envisioning exercise in the planning of urban spaces, in particular, envisioning what heritage and urban integration can look like for Kampong Lorong Buangkok even with imminent urban redevelopment and gentrification looming in the horizon.

The book, "Second Beginnings: Senior Living Redefined" [16] provides many good examples of envisioning how old public infrastructure can be given a new lease of life through clever and thoughtful design which incorporates current social challenges. In Singapore, one such current social challenge is that of the increasing number of seniors or the expanding size of the senior community (i.e. those aged 65 years old and above). One specific and relevant example given in the book is that of the *Healing Stadium* (pp.136-147), where an old stadium need not be demolished or bulldozed to the ground in order to make way for urban redevelopment or gentrification. Through the use of clever and thoughtful design, this old stadium can be re-purposed as a senior housing estate complete with gardens and exercise areas (Figures 4 and 5), breathing new and meaningful life to an otherwise unused, old and rundown infrastructure.

Fig. 4. Healing Stadium, photo 1.

Fig. 5. Healing Stadium, photo 2.

VI. CONCLUSION

The need for conservation cannot be adequately emphasized. Heritage education, rich historical knowledge and information, lessons from the challenges and realities of social integration and cohesion, and lessons on social and traditional values across generations in multi-religious, multi-cultural and multi-religious Singapore, can all be clearly demonstrated through conservation efforts such as that for Kampong Lorong Buangkok.

It is hoped that through this small-scale but meaningful project on Kampong Lorong Buangkok, the above can be shared with as many Singaporeans as possible. It is planned that such community and public outreach will be done through roving exhibitions in community spaces such as in the Singapore Institute of Technology main and satellite campuses, other university campuses in Singapore, the Community Centers, and the public libraries.

The work is just beginning.

CONFLICT OF INTEREST

The author declares no conflict of interest.

AUTHOR CONTRIBUTIONS

The author wrote this paper and is the principal investigator of the project described in this paper.

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