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## REFLECTION ON WISE CITIES AND AI IN COMMUNITY: SUSTAINABLE LIFE SPACES AND KAMPUNG STORYTELLING

MARK FINDLAY\* AND LI MIN ONG\*\*

### I. INTRODUCTION

This short paper is a reflection following our presentation made at the ASEAN Law Research Network's conference on Sustainable Development and Commerce in ASEAN Cities.<sup>1</sup> We had wanted to introduce our thinking, given the strong interest in developing smart cities in the region. We want to emphasise the importance of multidisciplinary approaches in the sustainable development of cities, particularly the voice of social scientists which tends to get left out in discussions over technology. In the race towards "smart" urbanisation, there is a real risk that history and culture – things that give a city "life" – could get decimated if digital transformations are not grounded in the community. We are very conscious that coming from Singapore, a well-to-do country and arguably already a successful smart city,<sup>2</sup> our views could be dismissed by our neighbours as superfluous or, worse, hypocritical. We stress that we are not at cross purposes with the growth imperatives of developing nations. Our story is that of a return to the community which we think resonates beyond development.

Our proposal of wise cities, with AI in community<sup>3</sup> as its foundation, and storytelling is a formulation that might sound radical but in fact is not entirely new. The impetus for our proposal is that while cities in Southeast Asia are well placed to apply smart solutions including AI-assisted technology,<sup>4</sup> the region is also experiencing the growing pains of rapid urbanisation:

Many booming cities are struggling to keep up with growing demands for decent housing, electricity, water, transit, healthcare, and education. In many places, the result is crippling gridlock, pollution, slums, and stress.<sup>5</sup>

When economic growth is neither inclusive nor equally distributed,<sup>6</sup> a city's social infrastructure is put under strain. Further, the "mass production" and the scaling of smart systems could mean that we end up with replicas of cities that have lost the

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<sup>1</sup> Conference on Sustainable Development and Commerce in ASEAN Cities, held at the Yong Pung How School of Law, SMU, on 12 November 2021.

<sup>2</sup> See e.g. McKinsey Global Institute, "Smart Cities in Southeast Asia" (discussion paper produced for the World Cities Summit 2018 in collaboration with the Centre for Liveable Cities, Singapore), available at <https://www.mckinsey.com/business-functions/operations/our-insights/smart-cities-in-southeast-asia> (last accessed 12 October 2021).

<sup>3</sup> "SMU's Centre for AI and Data Governance Launches New Research, Policy and Community Outreach Initiative to Improve Human-AI Exchanges" (SMU Newsroom, 17 June 2021), available at <https://news.smu.edu.sg/news/2021/06/17/smus-centre-ai-and-data-governance-launches-new-research-policy-and-community> (last accessed 5 August 2021).

<sup>4</sup> Spending power is increasing, digital literacy is on the rise. Cities are expected to be the centres of economic growth: McKinsey Global Institute, "Smart Cities in Southeast Asia".

<sup>5</sup> Ibid, at 9.

<sup>6</sup> ASEAN Secretariat, *ASEAN Sustainable Urbanisation Strategy* (ASEAN 2018), available at <https://asean.org/book/asean-sustainable-urbanisation-strategy/> (last accessed 15 November 2021).

original cultural connection, instead of enabling unique, place-based, information-rich cities to emerge.<sup>7</sup>

Our exploration into wise cities therefore starts with the following assumptions:

- A. “Smart” in smart cities is overly located on tech/data infrastructure and not sufficiently on social infrastructure.
- B. With Singapore as our case study, we argue that the spirit of the traditional village or “Kampung spirit”, the history of neighbourhoods is a good location for AI in community.
- C. Storytelling is central to the Kampung and important for neighbourhoods in urban transition (to the smart city).
- D. Storytelling is our research method because stories provide the “data” for AI to assist in the community for the purposes of social bonding.
- E. Digitised stories are for us a medium of social sustainability.

## II. WISE CITIES

“Wise cities” is an emerging concept in sustainability and environmental planning literature. It refers to wisdom drawn upon the long-term dynamics of local and regional ecological and cultural systems to achieve its goals, consisting of cross-disciplinary knowledge that originates and evolves from diverse philosophical and cultural backgrounds and across generations.<sup>8</sup> Compared to smart cities, wise cities draw more deeply from history, and emphasise place-based, life-centered systems.<sup>9</sup> In addition to explicit knowledge, wise cities also respect the tacit knowledge of its residents,<sup>10</sup> such as how a resident experiences, lives and feels about the city.

This idea of exercising wisdom to plan and build a city is not new but common sense. After all, history and culture are built over generations, and local communities have long found ways to thrive.<sup>11</sup> We turn to the kampung, an important part of Singapore’s cultural heritage, for our inspiration. While physical kampungs are now a rare sight in Singapore, the “kampung (village) spirit”<sup>12</sup> has arguably lived on and thus provides for us an ideal location for place-based social infrastructure.

## III. “KAMPUNG” STORYTELLING AND KNOWLEDGE SYSTEMS

Narratives are already known to be powerful socio-cultural tools; they are a central mode of human thought and vehicle of meaning making.<sup>13</sup> The stories we tell ourselves are what make us human. Storytelling is an important tradition in the kampung – the telling of oral histories and stories concerning neighbourhoods.

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<sup>7</sup> See the discussion in Robert F. Young and Katherine Lieberknecht, “From Smart Cities to Wise Cities: Ecological Wisdom as a Basis for Sustainable Urban Development” (2019) 62 *Journal of Environmental Planning and Management* 1675.

<sup>8</sup> Ibid.

<sup>9</sup> Ibid.

<sup>10</sup> Ibid. See also Robin Hambleton, *From Smart Cities to Wise Cities* (Policy Press Scholarship Online 2015).

<sup>11</sup> Deferring to nature is an embodiment of ecological wisdom: Young and Lieberknecht, “From Smart Cities to Wise Cities”, 1684.

<sup>12</sup> This refers to a sense of community and solidarity: National Archives of Singapore, “Kampung Spirit”, available at <https://www.nas.gov.sg/archivesonline/blastfromthepast/kampungspirit> (last accessed 15 November 2021).

<sup>13</sup> Ola Erstad and James Wertsch, “Tales of mediation: Narrative and digital media as cultural tools” in Knut Lundby (ed.), *Digital Storytelling, Mediatized Stories: Self-Representations in New Media* (Peter Lang Publishers 2008), available at <https://www.semanticscholar.org/paper/Digital-storytelling%2C-mediatized-stories-%3A-in-new-Lundby/Oe2f6bc0455c492680602d75ff8d040dbe287cf9> (last accessed 11 November 2021).

The story of modern Singapore can be seen as a success of rapid urbanisation. However, years of history, culture and diversity underlie its brief modern history. We note that the country is now experiencing a wave of nostalgia,<sup>14</sup> particularly since the country's 50th birthday celebrations. People talk about their childhood memories, neighbourhood landmarks and the games they used to play. We think that this longing for a simpler past and community is not specific to Singapore – the global popularity of the Netflix drama *Squid Game* (which spawned countless memes on the Internet) suggests that the modern themes of inequality, cutthroat competition and debt are universal.<sup>15</sup>

Our vision of a community is not one that is closed-in, but rather permeable and open to global influences. Our objective is not to rewind history and live in the past, but rather to question how we can help societies become more resilient against future shocks and crises. We want to look at how neighbourhoods and communities might generate and disseminate essential cultural knowledge for a sustainable wise city.

Understanding knowledge systems – a city's processes, practices and routines that make, validate, communicate and apply knowledge<sup>16</sup> – would be useful as wise cities require both tacit and explicit knowledge. Because smart city data tends to be created instantaneously and with little sense of local histories, decision-making based on such data risks wiping out centuries of culture and history. Narratives on the other hand are part of our living, bridging past, present and future.<sup>17</sup> It is essential that we think about the processes of sense-making, how we as humans give meaning to and interpret the worlds that we live in.<sup>18</sup>

#### IV. A CAUTION AGAINST TECHNO-SOLUTIONISM

AI is the backbone of a lot of the technology in a smart city, but for sustainability and the wise city, we want to emphasise that the sociology or anthropology of AI is important: technology is social and has social implications. AI is increasingly being used to organise data, predict outcomes and manage social worlds.<sup>19</sup> AI tools are not value-neutral, but are implicated in global economic and social inequality,<sup>20</sup> although they need not be. This is why we argue that AI has to be located in the community, that it has to be designed for the community it is deployed in.

#### V. A RETURN TO THE COMMUNITY

In moving to the smart, or preferably wise, city, we hope to recreate or reimagine the kampung life-space as a kind of indigenous digital space. There are already various

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<sup>14</sup> Tay Qiao Wei, "A Walk Down Memory Lane: What Will We Get Out of Nostalgia?" (Challenge, 1 July 2015), available at <https://www.psd.gov.sg/challenge/ideas/deep-dive/a-walk-down-memory-lane-what-will-we-get-out-of-nostalgia> (last accessed 15 November 2021).

<sup>15</sup> Zoe Williams, "Squid game owes its popularity to anxieties of modern life" (The Guardian, 9 October 2021), available at <https://www.theguardian.com/tv-and-radio/2021/oct/09/netflixs-squid-game-owes-its-popularity-to-anxieties-of-modern-life> (last accessed 15 November 2021).

<sup>16</sup> Knowledge co-production refers to "linked practices of knowledge production and application where diverse science, practice, and policy actors collectively identify problems, produce knowledge, and put that knowledge into action through collaboration, integration, and learning processes": Tischa A. Muñoz-Erickson, Clark A. Miller and Thaddeus R. Miller, "How Cities Think: Knowledge Co-Production for Urban Sustainability and Resilience" (2017) 8 *Forests* 203.

<sup>17</sup> Erstad and Wertsch, "Tales of mediation".

<sup>18</sup> Muñoz-Erickson, Miller and Miller, "How Cities Think".

<sup>19</sup> Kelly Joyce et al., "Toward a Sociology of Artificial Intelligence: A Call for Research on Inequalities and Structural Change" (2021) *Socius: Sociological Research for a Dynamic World* (18 March 2021), available at <https://journals.sagepub.com/doi/full/10.1177/2378023121999581> (last accessed 9 November 2021).

<sup>20</sup> Ibid.

digital storytelling projects – digital storytelling started out as a way to engage local communities in local action as well as to preserve local culture, with local stories to capture history that is in danger of disappearing, or stories that capture the identity of a place or culture.<sup>21</sup> Analogous to our concept of AI in community, such digital storytelling has been enabled by “participatory design” in the development of information systems, tools that support the autonomy of its users.<sup>22</sup>

Therefore, we propose that if neighbourhood stories are communicated and curated through AI-assisted information technologies – provided that such technology is grounded in the community – this would open up pathways and possibilities for sustainability: by embedding cultural storytelling within the urban knowledge infrastructure; by making transparent the decision-making and knowledge processes through open data; by creating safe digital spaces; by empowering communities and by enabling digital self-determination.<sup>23</sup>

## VI. CONCLUSION

If what we have outlined in this paper sounds radical, we suggest that that is because the narrative around smart cities and its role in development has to date been singular and homogenous. The challenge for our time, marked by various social, ecological and public health crises, is to pursue wisdom. This would require *integrating* multiple perspectives and for that we call for a return to the community.

*“Singapore’s distinctive cultural heritage is the anchor of national identity. At the heart of it, community ownership and their active participation are key to its sustainability.”*

Grace Fu, Minister for Culture, Community and Youth,  
10th Asia Cultural Co-operation Forum, Hong Kong, November 2017

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<sup>21</sup> Tone Bratteteig, “Does it matter that it is digital?” in Knut Lundby (ed.), *Digital Storytelling, Mediatized Stories: Self-Representations in New Media* (Peter Lang Publishers 2008), available at <https://www.semanticscholar.org/paper/Digital-storytelling%2C-mediatized-stories-%3A-in-new-Lundby/0e2f6bc0455c492680602d75ff8d040dbe287cf9> (last accessed 11 November 2021).

<sup>22</sup> Ibid.

<sup>23</sup> Nydia Remolina and Mark Findlay, “The Paths to Digital Self-Determination - A Foundational Theoretical Framework”, available at <https://papers.ssrn.com/abstract=3831726> (last accessed 29 June 2021).