

SUMMARY

In 2014, the Singaporean state began its Smart Nation project with Data Spark: a collaboration with the state-owned telecoms company Singtel. The project placed thousands of cameras and sensors around the city, in order to create a data feedback loop which could inform government policy. Since 2017, with assistance from Japanese tech conglomerate NEC, these cameras have been equipped with AI-enabled facial recognition software. In the intervening years, this network has expanded. By 2030, the Singaporean police aims to have 200,000 cameras across the Island. The state positions itself as a testbed for techno-governance, and a hub for AI in Southeast Asia. The Singaporean state imagines its future as one where technology and data feedback loops ensure the smooth functioning of government policy.

Situated Within this wider techno-governance milieu is MUIS, the Islamic Religious Authority. As a statutory board, MUIS has close ties to the ruling PAP (People's Action Party). Consequently, the religious authority often find themselves acting as intermediaries between the State and the Singapore Muslim Community. This position can be fraught given the governments historical marginalisation of the Muslim community. MUIS, therefore, represents a site where the governments techno-futurist imaginaries come into contact with the messy reality of people's everyday lives. My research arises from this tension, explores how MUIS takes up government-promoted AI technologies for religious governance, and examines how these technological innovations are received by Singaporean Muslims.

This leads me to the question; "What futures are imagined by Muslims in a Singapore dominated by AI-enabled technologies?" By dominated, I am referring to more than the AI interfaces which people consciously engage with as users. AI is much more than its textual or visual outputs. In this thesis, I engage not simply with interfaces, or algorithms, but with AI as a broader set of material and imaginative conditions. AI in my view represents several facets. First, an imaginary: one held by a Singaporean state hoping for objective, data driven policy. AI here is a way of thinking about the world which shapes government policy. Second, AI is increasingly perceived as a repository of 'truth' by some state institutions in Singapore wherein information contained and produced by these systems are positioned as objective. Finally, AI is a multinational infrastructure supported by networks of cables, cameras, and data centres. For example,

in Singapore, many data centres are located across the border in Malaysia, many government AI systems rely on a base of ChatGPT software developed in America, and the raw materials of these systems come from all around the world. In all these ways AI saturates the everyday lives of Singaporeans. Despite this ubiquity, however, AI systems are often invisible. They are used within state institutions, stored in data centres behind fences, and consequently blur into the background.

Through collaborative methods this thesis begins to peel back the layers of AI systems, to make them more tangible to me and my interlocutors. Each chapter takes up a different perspective on AI systems in order to produce a partial-composite view of AI systems which are too diffuse to be understood from any one perspective. The opening ethnographic chapter explores how AI has become a central imaginary for the Singaporean state, and how these imaginaries shape representations of the future. The second chapter shows how MUIS turns this imaginary into policy through its AI Fatwa Bot project, and seeks to explain why the organisation feels compelled to integrate AI into their religious governance. The following chapter shows how AI “regurgitates” the contents of their database. I do so by framing AI as a kind of archive which like all other archives has power through what it includes and excludes. Finally, the last two ethnographic chapters explore how Singaporean Muslims refuse the ubiquitous AI futures asserted by the Singaporean state. The last chapter in particular makes the AI infrastructures of Singapore tangible by transducing them into sound which I then used in elicitation exercises aiming to render the city my interlocutors knew well in unfamiliar ways.

No single methodology could answer the questions arising from these multiple viewpoints. Therefore, to get a partial complete image of AI, I needed to think of it, together with my interlocutors, as its component parts. To do this, I needed to create contexts in which my interlocutors could experience AI in their everyday. To understand AI as policy I looked to the public talks of government institutions to understand how they defined it. To see AI as a cultural artifact which can be imagined in a plurality of ways, I looked to the work of artists and MUIS who use AI in different ways. To read AI as an archive, I allowed my interlocutors to annotate ChatGPT’s writing in order to question how it regurgitates the texts within its database. Finally, to hear AI as an infrastructure, I walked with my interlocutors through fields both visible and electromagnetic to speculate on where AI existed. Taken together, these parts of AI create a composite, partial, image of AI as it intervenes in daily life. AI is a

technology which is shaping government policy, writing, soundscapes, and our future, yet in many ways it remains strangely invisible. This toolkit of methodologies aimed to make AI tangible.

This methodology led to three main findings. 1.) While AI is a new aspect of Singaporean governance, it is motivated by old anxieties in Singapore. Namely, economic survivalism, which places the economy above all other priorities, and which emphasises that precarity of Singapore as a small nation surrounded by bigger ones. AI is seen as aligned with this anxiety because it is an industry which is perceived as not needing access to natural resources or manpower. 2.) This narrative which sees Singapore's neighbours as threats trickles down into MUIS, where they are preoccupied with ensuring that Singaporean Muslims follow a Singaporean conception of Islam. This is a consequence of the state historically positioning Muslims as an internal and external threat to stability because of their shared racial ties with the majority Muslim population in Malaysia. AI promises to help solve this problem by centralising religious knowledge and producing an authoritative "Singaporean Islam". 3.) Finally, I found that AI regurgitated State narratives in its outputs. I use the word regurgitate to reflect that AI systems can only reproduce the contents of their dataset. This is a result of the fact that AI recreates the average of its dataset, and therefore repeats biased ideas about the Muslim community which have proliferated in Singapore since the 1960s. My interlocutors were able to identify these narratives when annotating ChatGPT generated text, even when at first glance these texts seemed innocuous.

Despite the ubiquity of these future narratives, I conclude that many of the Muslims I met in Singapore refused the futures asserted by the state. They did so by reaching for pasts which are not included in the narratives present in the AI archive or state representations. These pasts construct Singapore's larger neighbours Malaysia and Singapore not as a proximate danger, but a lover separated from Singapore; the community as imperfect but warm, rather than a destabilising force; and Islam as a syncretic practice, to name just a few. What futures are imagined by Muslims in a Singapore dominated by AI enabled technologies? They are blurry, multiple, and only a handful of them were presented in this thesis. Consequently, they all refuse the foreclosed futures proposed by the Singaporean state, and the AI enabled Smart Nation. I refer to this process as blurring the future, in which the certainty about the future is intentionally undermined by proposing alternatives.

One limitation of my research was its timing. Whilst LLMs were big news in 2023 when I conducted fieldwork, their use by the general public had not yet widespread. My interlocutors often knew a lot about AI, but the majority said they had only used LLMs like ChatGPT once or twice, and even fewer had used them in a religious context. Similarly, MUIS was only beginning its AI project, the AI Fatwa Bot, and I only met with its development team in my final weeks in Singapore. What becomes of that project will have a significant bearing on the future of the Muslim community in Singapore. Whether for good or ill remains to be seen, and future research on this topic would add much to this thesis.

As a consequence of being early, I rarely got the opportunity to witness my interlocutors engaging with AI systems. There was not much talk at that time of critical “prompt engineering” in Singapore, and what there was, had not really filtered into the lives of my interlocutors. As a consequence, my research focuses more on observing how ChatGPT and other AI systems were being received, being talked, and thought about. What I present here is what AI systems did at the time, not what users could potentially make it do, although the latter would make for compelling future research that could further expand ideas of blurring through user input.