

(Trans)forming the Air-Conditioning Complexes: Climate Control, Built Environment and Society in Singapore and Doha

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Since the mid-twentieth century, air-conditioning has been one of the most transformative socio-technological forces in the urban built environment globally. It has created new building types and urban forms, radically transformed urban environments, and enabled new ways of urban living. It has even changed the geography of urbanization. As an energy-profligate technology, air-conditioning is a major source of carbon emission contributing to planetary climate change. As the Global South develops and urbanizes further, it is projected that the uptake of air-conditioning and the attendant energy consumption will increase exponentially, creating what International Energy Agency described as a “looming cold crunch” that will further exacerbate climate change. Despite the centrality of air-conditioning in both our environmental pasts and futures across different scales and geographies, most of the research done on air-conditioning is narrowly focused on its engineering aspects, neglecting its social, cultural, and political dimensions. This research proposes to rectify this oversight by examining the historical formation of the air-conditioning complexes in Singapore and Doha, two heavily air-conditioning-dependent cities in two hot climatic zones in the midst of the world’s rapidly urbanizing regions. By the air-conditioning complex, I am referring to the socio-cultural and techno-political relationships between what I call regimes of (dis)comfort, assemblages of architectural enclosures, and thermal material entanglements. In this research project, I ask the following sets of questions:

1. How do we understand the historical formations of the air-conditioning complexes in Singapore and Doha? What are the relationships between cooling technologies, built environment, and society in these air-conditioning complexes? And how did they first emerge and then evolve over time?
2. What do the cases of Singapore and Doha tell us about the globalization of air-conditioning in relation to geo-climatic, socio-cultural, and techno-political differences?
3. What do the histories of Singapore and Doha locking into air-conditioning dependency tell us about how they and similar cities in their regions might break the current dependency on air-conditioning in the future?