URBAN INVENTIONS FOR SINGAPORE IN YEAR 2040: THROUGH EXTRAPOLATION OF NUMERICAL DATA IN PHYSICAL PLANNING

by

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Submitted to Department of Architecture, School of Design and Environment on November 29 2000 in Partial fulfilment of the Requirements for the Degree of Master in Architecture

ABSTRACT

This dissertation is an investigation into the possibilities and viability of housing a population of 5.5 million in Singapore. To grasp the possibility of such high-density development, numbers are used to inform, explore and possibly invent options in the physical environment under numerous extreme scenarios. The result of creating scenarios to an extreme leads to an awareness of the present and future state we are in.

By extrapolation of the numerical data and then translating into diagrams- a methodology which marries the numerical realm of statistics and the physical realm of planning- the consequence of certain physical planning decisions can be understood more easily. This is a response to the vagueness in the urban planning strategy that Singapore currently undertakes.

The dissertation starts with a review of landuse planning history in Singapore. Singapore’s urban planning strategy has largely been developed from the Western precedent models. The most influential one is that of Ebenezer Howard’s Garden City Concept.

The population of Singapore is expected to grow to 5.5 million by Year 2040. There is a need to look into options of planning Singapore due to the smallness of the island and other important environment concerns. Using the same model, Singapore would need another 10 New Towns of the size of Hougang. The study will investigate if there are alternatives, besides building New Towns in a tabula rasa fashion, to house the additional 1.5 million population.

Several options of land resources are named, and some economical and ecological parameters help set up various scenarios to house the additional population. Upon investigation, the scenarios start to present a clear picture of the possible built landscape that can result. New urban inventions- planning policies, urban forms and architecture agendas- thus emerge and offer themselves to be possible solutions for Singapore’s urban planning.

The methodology will allow urban inventions to occur, addressing the concerns of Singapore of the environment and the people. By so doing, new urban models are invented for Singapore’s urban planning.

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