Water as a Public Condenser

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Research Question

My graduation project aims to provide a public condenser for the ever-growing population of families in Friedrichshain, Berlin. Based on research and on-site interviews conducted during the study trip to Berlin, the community centre aims to serve the district of Friedrichshain and its growing population of young families and children. I conducted several interviews on the street with young parents that expressed how the district has enough parks and playgrounds for their children but would love to have more indoor activities that also catered to younger children such as toddlers. The desire for certain communal facilities, namely a swimming pool, and more indoor communal spaces for families and young children has led me to utilise water and thermodynamic properties as a design device.

My fascination with using water as a design device lies with how water has always been a gathering point, a place to meet, socialise and relax. It signifies nature, cleanliness and rejuvenation and has always been an attractor for social spaces. The state of water can exist in several forms: gaseous (steam, mist, fog), liquid (rain, river, pond), solid (ice) or crystalline (snow). The dynamic state of water presents numerous opportunities for it to be used as a spatial tool both indoors and outdoors. Utilising thermodynamic principles, i.e. the relationship between temperature and humidity, I am in search of thermal landscapes that will foster different social interactions.

My research question lies in how I can combine providing for the growing population of families in Berlin and water as a design device.

Methodology

The works by Phillipe Rahm serve as my main inspiration for utilising water and temperature as design devices. The Jade Eco Park in Taichung, Taiwan was designed so that a diversity of microclimates and a multitude of different sensory experiences in different areas of the park depend on the hour of the day or the month of the year. These areas were identified as ‘cool areas’ (temperature), ‘dry areas’ (humidity), and ‘clean areas’ (purification of air). By naturally and artificially changing the temperature, humidity and pollution, the park generates spaces of varying levels of comfort and enjoyment where users can move freely through and choose to occupy as they see fit. I aim to study and utilise his methods and design principles within my own project.

My research also takes on the technical side of passive house principles. The REAP Rotterdam Energy Approach and Planning (Tillie et al., 2009) presents the theory of pairing functions that have opposite heat and energy needs so that they may feed each other’s energy streams. For example: pairing a supermarket (that gives off excess

heat) and housing (that requires constant heat). More research into similar principles will be needed to truly optimise energy usage within my building.

Case Studies

Jade Eco Park - Philippe Rahm architectes (no date). Available at: http://www.philipperahm.com/data/projects/taiwan/index.html (Accessed: 9 November 2022).

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