Reflection Paper

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What is the relation between your graduation project topic, your master track, and your master programme?

The gradation topic, which suggests ways to reuse existing Korean apartments, is closely related to the Architectural Engineering Studio's topic (Open Building Principals), which look at the use of buildings from a long-term perspective. In addition, this Open Building principle is linked to the Circularity of the architectural industry ecosystem pursued by the Architecture track, and ultimately, concerns about the future system of Korea's representative residential facilities are consistent with MSc AUBS's direction of approaching architecture from the perspective of urban, technology, and science.

How did your research influence your design/ recommendations and how did the design/ recommendations influence your research?

The research conducted in the first half of the project was a study on new services that would make the use of existing Korean apartments (Apatu) flexible. First, by analyzing existing service installations, it was possible to devise the limitations of the existing system and the essential service for the environment of Korea. As a result, research on the Earth, Wind, and Fire (EWF) concept that not only simplifies the existing installation to make buildings flexible but also reduces the use of fossil fuels using principles of nature was followed. The research was used as a concept for a comfortable indoor environment in the climate design stage of the building, and skin research and design as a climate buffer for the stability of maintaining a comfortable indoor climate were additionally considered. In addition, a backup strategy for special climate conditions was considered and reflected in the design. The new service layout, which will create maximum flexibility as a result of the research, has influenced various aspects of design such as the overall configuration of the building, the extension structure, infill form and system, and migration strategies for existing residents.

How do you assess the value of your way of working (your approach, your used methods, used methodology)?

The start of the project began with raising the issue of the current context. The causes of apartment industry problems accumulated for a long time in the context of Korea were closely analyzed with statistics, and rather than an immediate solution to the phenomenon of the current problem, there was a fundamental consideration of the cause

of the problem and an approach to finding solutions in Korea's traditional way of life before the problem occurred. This is not a short-sighted solution to the current problem, but a long-term and integrated solution that combines the wisdom of the traditional life of ancestors before modernization (Traditional circular and collective living), principles of nature (Earth, wind, and fire concept), and new progressive new technologies (CNC Technique). In addition, abstract concepts that are difficult to quantify, such as 'flexibility', could be defined appropriately for the project through various literature studies. Also, by applying a quantified objective evaluation methodology to various proposed building service layout options, a service that supports the building as flexibly as possible could be drawn as the conclusion of the research.

How do you assess the academic and societal value, scope and implication of your graduation project, including ethical aspects?

The graduation project ‘Re-living Concrete City’ has academic, social, and ethical stances on various social and environmental problems caused by existing undemocratic architectural methods. The existing housing supply method, which was supplied one-way by a large construction company, emitted a huge amount of carbon and caused various environmental pollution by demolishing and reconstructing concrete buildings every 30 years in the same way. Based on this recognition of the problem, this project would reduce reckless waste of resources and energy use by renovating existing buildings into vertical infrastructure that can be used flexibly in the future, rather than demolishing them. In addition, apartments have been recognized as a space for real estate speculation, not a space for living, due to the uniform residential space and uncomfortable indoor environment according to the existing mass supply-oriented building method. However, in this project, as an alternative to such supply-oriented architecture, the self-build method that residents can make their own houses was selected. This is a flexible and democratic architectural method that allows users to create their own configuration by constructing their own spaces, as well as creating public spaces that our society truly needs, and through the process, finally, they will be able to regain their own common.

How do you assess the value of the transferability of your project results?

Reusing Mapo Samsung Apatu selected as the context is not the only solution for a single project. Most of Korea's Apatu typology is a representative type of architecture that has been propagated nationwide in the past few decades by some large construction companies. As a result, each Apatu in Korea has similarities, such as a load-bearing wall structure with an interval of about 4m, an in-situ reinforced concrete construction method integrated with service installations, and a space composition for a family of three to five with two apartment units sharing one core. Therefore, Apatu's reuse method for this graduation project, such as a new service system that supports flexible space, a structural principle that minimizes damage to the existing site, a democratic housing module that reflects the requirements of each resident, and skin system that use natural principles to reduce energy consumption and take into account the urban climate, is an integrated approach that can be applied to various Apatu residential types in Korea.