

CONFERENCE PAPER

NZAAR-UDCP-16-53 ICUDCP 2016

Urban Context of Church Architecture & Spatial Reconfiguration Aimed for Improving Utility in Using Architectural Space

Park Seungbae, Oh Sangjoon^{*}, Yeo Jangkwon, Kim Hongkyu

Department of Urban Planning & Engineering, The Graduate School, Yonsei University, Seoul, South Korea

^{*} Correspondence: oossjj0808@naver.com

PUBLISHED IN

The First NZAAR International Event Series on Natural and Built Environment, Cities, Sustainability and Advanced Engineering
International Conference on Urban Design and Cities Planning (ICUDCP 2016)

Pages	154-155 of the volume
Held	26 June 2016, Shangri-La Hotel, Putrajaya, Malaysia
ISSN	2463-5979 (online) 2463-5960 (print)
Publisher	New Zealand Academy of Applied Research Ltd, Auckland

ABSTRACT

The goal of the present study is to analyze the spatial utility of Korean church buildings, as well as cost efficiency in their construction, while interpreting the urban context they are associated with, by exploring the spatial placement within buildings and their use rate and calculating construction cost by section. A key finding of this study is that there has been a significant deviation from the ministry of Christianity in the architectural spatial layout of church buildings. Architectural space of church must be recomposed so as to meet the nature of ministry of gospel, of which direction is that the space of church buildings must be allocated in a balanced manner according to the purpose and weight of church missions such as worship, regional society, education. Setting aside the current design tendency that is excessively focused on having a worship-oriented space around a main chapel, architectural spaces must be redesigned to allow for ministry-oriented spaces inclusive of interactions with the community, education, culture and human intercourse, which highlights the need to reduce worship space while enlarging the spatial ratio toward intercommunicative, cultural and fellowship interactions with the community. Considering that small groupings for church activity are expected to be a dynamic force in the future, the physical space of churches must be sectioned into smaller ones so that a variety of demands within a church can be absorbed, and this flexible spatial configuration can accommodate gatherings by small groups. Protestant churches in Korea must significantly reduce their gross areas. Protestant ...

Keywords: Church; Urban Context; Reconfiguration of Architectural Space; Utility; Multi-functionalization

HOW TO CITE

Park Seungbae, Oh Sangjoon, Yeo Jangkwon and Kim Hongkyu (2016). Urban Context of Church Architecture & Spatial Reconfiguration Aimed for Improving Utility in Using Architectural Space. In *The First NZAAR International Event Series on Natural and Built Environment, Cities, Sustainability and Advanced Engineering*, Putrajaya, Malaysia, 26 June 2016 (pp. 154-155). Auckland: New Zealand Academy of Applied Research. ISSN 2463-5979 (online), 2463-5960 (print).

URBAN CONTEXT OF CHURCH ARCHITECTURE & SPATIAL RECONFIGURATION AIMED FOR IMPROVING UTILITY IN USING ARCHITECTURAL SPACE

Park Seungbae, Oh Sangjoon*, Yeo Jangkwon & Kim Hongkyu

Department of Urban Planning & Engineering, The Graduate School, Yonsei University, Seoul, South Korea

**oossjj0808@naver.com*

www.nzaar.com

Abstract

The goal of the present study is to analyze the spatial utility of Korean church buildings, as well as cost efficiency in their construction, while interpreting the urban context they are associated with, by exploring the spatial placement within buildings and their use rate and calculating construction cost by section. A key finding of this study is that there has been a significant deviation from the ministry of Christianity in the architectural spatial layout of church buildings. Architectural space of church must be recomposed so as to meet the nature of ministry of gospel, of which direction is that the space of church buildings must be allocated in a balanced manner according to the purpose and weight of church missions such as worship, regional society, education. Setting aside the current design tendency that is excessively focused on having a worship-oriented space around a main chapel, architectural spaces must be redesigned to allow for ministry-oriented spaces inclusive of interactions with the community, education, culture and human intercourse, which highlights the need to reduce worship space while enlarging the spatial ratio toward intercommunicative, cultural and fellowship interactions with the community. Considering that small groupings for church activity are expected to be a dynamic force in the future, the physical space of churches must be sectioned into smaller ones so that a variety of demands within a church can be absorbed, and this flexible spatial configuration can accommodate gatherings by small groups. Protestant churches in Korea must significantly reduce their gross areas. Protestant churches was analyzed determined as 3.8~5.4 m^2 , which is two times higher than that of Catholic churches, 1.0~2.6 m^2 . This means that protestant churches use excessive space compared to catholic churches, and the gross area of present protestant churches can be reduced to half. The core of this indicates the change in the conventional concept about church architecture as well as spatial reconfiguration and multi-functionalization of church architecture, which is the essence and key implication of this study.

Keywords: Church, Urban Context, Reconfiguration of Architectural Space, Utility, Multi-functionalization

1. Introduction

The objective of this study is to grasp understanding of spatial efficiency by analyzing architectural spatial configuration associated with Korean Christianity among religious facilities within Korean cities as well as actual Service rate by spatial section and construction cost by spatial section, and further propose the novel spatial reconfiguration based on the result thereof, consequently rendering meaningful suggestions for preventing hollow facility use and rehabilitating sustainable growth in Korea's protestant churches. This is the time to carry out researches with diversified angles to expanding/strengthening interactions with

the communities and concretizing the sense of co-existence, a fundamental concept of church, by getting rid of waste elements in church's architectural space and leaving apart from clique of own members and exclusivity in architectural spaces. To summarize the objectives of this study, the first relates to analysis on the context of church architecture linked with urban spaces, the second to interpretation on historicity of church architecture, the third to analysis on construction cost versus use efficiency (utility) via case study, and the fourth to understanding, based on the survey, of what the architectural space of church must be in the future.

2. Literature Review

The sustainable development is widely implemented over the world and many research papers regarding it have been published. Among them is a paper of Mak-joong Choi, outlining the need of sustainable development in cities by stating, “The keyword of the times applicable throughout the whole world in the aspect of city planning is sustainability. It is a concept requiring the city development by taking into account environmental, economic and social impacts in an integrated manner for the intergenerational equity, which is diversely progressed with the concept of ESSD (Environmentally Sound and Sustainable Development) in Europe and the concept of growth management or smart growth in the USA. As such, greatest attention in regard of city planning has been paid than ever on reuse of limited land resources along with efficiency and environment-friendliness in the use of land, cost saving associated with traffic and infrastructure, reduction of the use of fossil fuel and minimization of damaging the natural ecosystem and landscape.” Mak-Joong Cho (2007), Syntax of super high rise buildings in the dimension of urban space structure-p3, policy discussion symposium by Korea Planners Association (2007-05)

3. Research Methods

Sampling process and reason of selecting a sample [1], Locations of churches for study, Magnitude of sampled churches, Construction year of churches, Number of samples, Space Syntax, Cause of incorporating Space Syntax, Space Syntax is a program enabling to analyze architectural churches of consideration under the urban context, being incorporated for the research for attempting to analyze the urban characteristics of churches. Objects to which the program was employed, Full application was made out of all 10 churches sampled. Scope implemented: Space Syntax for the outdoor space of

church and Space Syntax for the indoor space of church, the number of samples selected totals 10 consisting of 5 protestant churches and 5 catholic churches.

4. Discussion and Conclusion

It was also found that improvements are required with regard to excessive spatial volume in churches; in particular, the large spatial structure of main chapels must be reviewed in a wide spectrum. For example, the elevation of main chapels in a total of 10 churches surveyed by this study was around 9.0~15.1m, with 12.1m on average, which is 2~3 times higher than that of other spaces. Given that it sees little use except for weekend worships and other special events, the of the main chapel must be redesigned toward eliminating a mezzanine floor for the sake of reducing construction costs and making maintenance easier and more economical. There is no quantitative evidence linking high elevation of the main chapel and any concept of sanctity, so its floor height must be reduced without reluctance. Moreover, the floor slope in the main chapel area must be configured to be flat to ensure multi-functionality in the future. The worship service can be practiced via multimedia screens, which we must know is the future trend.

5. References

- [1] “Status of Religions in Korea as of 2008”, press release data (Jan 19, 2009), the Ministry of Culture, Sports and Tourism
- [2] Mak-Joong Choi (2007), Syntax of super high rise buildings in the dimension of urban space structure, policy discussion symposium by Korea Planners Association