

論文 / 著書情報  
Article / Book Information

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Title(English)	Applicability, Changeability and Inhabitability in the Concept of Capsule Architecture
著者(和文)	デレズニチェンコ ヴォロディーミル
Author(English)	Volodymyr Dereznichenko
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Category(English)	Doctoral Thesis
種別(和文)	論文要旨
Type(English)	Summary

(博士課程)  
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## 論文要旨

THESIS SUMMARY

系・コース： Department of, Graduate major in	建築学 建築学	系 コース	申請学位 (専攻分野) : Academic Degree Requested	博士 Doctor of	(学術)
学生氏名 : Student's Name	Dereznichenko Volodymyr		指導教員 (主) : Academic Supervisor(main)	塩崎太伸	
			指導教員 (副) : Academic Supervisor(sub)		

要旨 (英文 800 語程度)

Thesis Summary (approx.800 English Words )

The title of the thesis is “Applicability, Changeability and Inhabitability in the Concept of Capsule Architecture”. The research consists of six chapters and explores the so-called typology of capsule architecture from the viewpoint of applicability, change over time, and social aspects.

Chapter 1. “Introduction” defines the scope and framework of the whole study. The chapter sets the approach of exploring the concept of capsule architecture from a practical viewpoint. From the studied literature sources the concept of the typology can be divided into three viewpoints: 1) applicability and its reflection on spatial and physical characteristics, 2) changeability which allows to either prolong the lifespan of capsule architecture or lead to periodical technical transformation, and lastly, 3) social aspect highlighting the role of a capsule in a relation to society. By analyzing the concept of capsule architecture from these three points of view, it becomes possible to provide a clear definition of capsule architecture and test its real capacities in a practical realm. The methodology applied in the research can be summarized in a framework: 1. By studying literature sources the study extract the definition of a capsule, and defines scope of the research and timeframe applicable to study the typology; 2. Next, during the defined timeframe the study collects examples of capsule architecture and examines them from three following aspects (in overall - 265 examples): applicability (why architects use capsules), changeability (why and how capsule architecture can practically change), and social aspect (how practically utilize capsules for actual living). Lastly, 3. The research summarizes the concept of capsule architecture and its practicability.

Chapter 2 “Concept and Physical Characteristics of Capsule Architecture” explains its concept by studying texts and projects of architects using capsules in their designs. This chapter defines the main aspects in applicability of capsules, namely: “mobile”, “mental” and “growing” capsules. Next, the chapter concentrates on the study of characteristics of capsules regarding their dominant shapes, basic functions, materials, and size, as well as, the properties of the structures they create, that is the relationship between capsules and the bearing structure together with a number of capsules arranged within a single building what is followed by comparison of two selected time periods of 1930–1970s and 1980s–2010s in this regard. Lastly, the study observes how concept and definition of a capsule is reflected on its physical characteristics as introvert environment, joints to connect to other capsules, lightweight materials for better mobility, etc.

Chapter 3 “Aspect of Changeability of Capsule Architecture and Actual Renovation” studies both the unbuilt and built examples of capsule architecture. The built examples then are subdivided into categories by means of change as proposed by an architect. In the built cases it is observed whether the building was demolished, and whether the initial means of changeability were realized on practice in existing cases (technical change according to the initial concept). Also, it is observed whether the built case was undergone renovation different from the original concept. As a result eight primary ideas of change and seven new renovation approaches were extracted. The chapter shows that the ideas of change over time are due to the technical nature (primary heavy manipulations with capsules) are unfeasible and rarely can be observed while more resilient approaches as mobility or recycling appear more often in built examples.

Chapter 4 “Social Aspect of Capsule Architecture, its Residents and Communities” studies social aspect of a capsule, that is, who a capsule is provided for and what social value it contains. From various notions main types of capsules are extracted as follows: leisure, nomadic and urban capsules. Next, the

study proceeds with the analysis of a capsule as means for living and habitation and studies both built and unbuilt residential capsules from a set of parameters in order to clarify features and standards of living in a capsular space. In the next section the questionnaire among residents of capsule architecture worldwide is conducted. From 15 study cases 47 responses were obtained and included a lot of commentary regarding the residents' lifestyle and their attitude towards their experiences. Lastly, in the selected nine cases of capsule architecture the research on existing communities.

Chapter 5 "Theory and Practice of Capsule Architecture" analyses the concept from the studied three aspects. The chapter observes application of capsule architecture and argues if a definition of a capsule and capsule architecture can be expanded considering its practical aspect.

Chapter 6 "Conclusion" summarizes the chapters above and unify the collected results. As an endnote, the chapter also includes the project of actual renovation of one of the capsules inside the building under the framework provided by one of the actual renovation methods currently existing in this building.

備考：論文要旨は、和文 2000 字と英文 300 語を 1 部ずつ提出するか、もしくは英文 800 語を 1 部提出してください。

Note : Thesis Summary should be submitted in either a copy of 2000 Japanese Characters and 300 Words (English) or 1copy of 800 Words (English).

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