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PREFACE

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In the fiscal year 2018 (April 2018–March 2019), the following activities were carried out. I would like to express my gratitude to the many people who supported these activities.

2018 年度（2018 年 4 月～2019 年 3 月）には、以下のような活動が行われた。活動を支えていただいた多くの方々に感謝を申し上げる次第である。

"Symposium on Restoration and Conservation of Traditional Timber Structures 6", hosted by KUDEB (Department of Cultural Assets Conservation, Directorate for the Conservation, Implementation, and Supervision of Cultural Assets, Istanbul Metropolitan Municipality), was held on April 24-25 2018 in Istanbul, Turkey. Okazaki attended the symposium and gave a presentation, which was entitled "Restoration and Conservation of Traditional Timber Structures in Japan: Japanese Sophisticated Traditional Timber Structure Designs and Five Methods for Restoration and Conservation of Japanese Traditional Timber Structures", at a special session.

2018 年 4 月 24 日（火）25 日（水）にイスタンブールで、KUDEB（イスタンブール市立の文化財保護局）主催の「第 6 回伝統的木構造の保存修復に関するシンポジウム」が開催された。本学から岡﨑が参加し、特別セッションにて発表を行った（発表タイトルは "Restoration and Conservation of Traditional Timber Structures in Japan: Japanese Sophisticated Traditional Timber Structure Designs and Five Methods for Restoration and Conservation of Japanese Traditional Timber Structures"）。

We held the ICSA in Japan 2018, as we do every year. Ten students, along with Prof. Murat Dundar and Assist. Prof. Belinda Torus from the Faculty of Architecture and Design at Bahçeşehir University (BAU), Turkey, visited Japan on Tuesday, July 10 2018. The BAU students collaborated with second-, third-, and fourth-year Mukogawa Women's University (MWU) architecture students and devoted themselves to design exercises and field work..

例年の通り ICSA in Japan 2018 を開催した。トルコ・バフチェシヒル大学建築デザイン学部の学生 10 人とムラト先生、ベリンダ先生が 2018 年 7 月 10 日（火）に来日した。2、3、4 年生のスタジオで武庫川女子大学建築学科の学生と机を並べて設計演習やフィールドワークに励んだ。

ICSA in Rome, the program for practical training related to architectural conservation and restoration, was held from Tuesday, February 19 2019 to Saturday, March 2 2019, under the auspices of BAU, at Rome where BAU's branch campus is. Two professors and eleven second-year master's students from MWU attended the program, which turned out to be fruitful.

トルコ・バフチェシヒル大学の分校が設置されているローマにおいて、建築保存修復関連の実習を行うプログラム ICSA in Rome が、バフチェシヒル大学主催のもとで 2019 年 2 月 19 日（火）～3 月 2 日（土）に実施された。本学建築学専攻の教員 2 名と修士 2 年生 11 名が参加した。実りの多い実習となった。

Since 2015, MWU has been holding a series of lectures called "Silk Road Culture and Architecture" at the Industry Club of Japan Hall, which is located in front of Tokyo Station. The 8th and 9th meetings of this lecture series were held in the fiscal year 2018.

The 8th meeting was held on Saturday, May 26 2018 with the title "Indian Buddhist Culture and the Silk Road: The Beautiful Colors and Skills of the Craft." Prof. Yasuko FUKUYAMA (Faculty of International Studies, Ryukoku University) delivered a lecture on " The Various Aspects of Indian Buddhist Culture as Seen Through Cave Art with a Focus on the Ajanta Cave Temple." Assoc. Prof. Yoshiko SHIMADZU (National Museum of Japanese History) gave a lecture on "Architectural Painting and Wall Painting at the Ajanta Cave Temple from the Perspective of the Painting Materials Used." In addition, Miki NONAKA (Eastern Indian-style Dancer) performed the classical Indian Odissi dance.

The 9th meeting was held on Saturday, January 19 2019 with the title "The Culture of Stupa-Beliefs." Prof. Akira MIYAJI (Professor Emeritus of Nagoya University and Ryukoku University) delivered a lecture on "The Shape of the Stupas/Pagodas and Worldview: India's Origins and Evolution." Assoc. Prof. Shumpei IWAI (Ryukoku Museum, Ryukoku University) gave a lecture on "Stupas of Gandhara: Their Periods and Spread." Additionally, Tarō TERAHARA (Bansuri Player), Ayako IKEDA (Tabla Player) and Makiko IZAWA (Tanpura Player) performed the classical North Indian music.

武庫川女子大学は 2015 年から、講演会シリーズ「シルクロードの文化と建築」を東京駅前の日本工業倶楽部で開催している。2018 年度は同シリーズの第 8 回と第 9 回を開催した。

第 8 回は、2018 年 5 月 26 日（土）に「インド仏教文化とシルクロード －華麗な色彩と匠の技－」というタイトルで開催した。福山泰子氏（龍谷大学国際学部教授）による講演「インド石窟芸術にみる仏教文化の諸相 －アジャンター石窟寺院を中心に－」、そして島津美子氏（国立歴史民俗博物館研究部情報資料研究系准教授）による講演「アジャンター石窟寺院にみる建築塗装と壁画 －彩色材料の視点から－」、さらには野中ミキ氏（東インド舞踊家）によるインド古典舞踊オディッシィのパフォーマンスが行われた。

第 9 回は、2019 年 1 月 19 日（土）に「ストゥーパ〈仏塔〉信仰の文化」というタイトルで開催した。宮治昭氏（名古屋大学名誉教授、龍谷大学名誉教授）による講演「ストゥーパ・塔のかたちと世界観 －インドの源流と展開－」、そして岩井俊平氏（龍谷大学龍谷ミュージアム准教授、学芸員）による講演「ガンダーラの仏塔 －時期とその広がり－」、さらには寺原太郎氏（バーンスリー奏者）、池田絢子氏（タブラ奏者）、伊澤真希子氏（タンプーラ奏者）による北インド古典音楽の演奏が行われた。

The Institute of Turkish Culture Studies hosts annual seminars at Koshien Hall dedicated to the cultures, history, and architecture of the Silk Road and of the various countries along the Silk

トルコ文化研究センターは、甲子園会館で、毎年研究会を主催する。そのテーマはシルクロードとそれを取り巻く国々の文化や歴史や建築に関するものである。今年度も 3 回の研究会を開催

Road corridor. This year, as in years past, three seminars were held.

The first seminar convened on Thursday, March 7 2019 and featured Dr. Muping BAO (Cooperative Researcher, Institute of Industrial Science, The University of Tokyo), who gave a talk on "Climate, Material, and Construction Methods: Mongolian Cities and Their Architecture."

The second seminar on Wednesday, March 13 2019 was also led by Dr. Muping BAO. The title of her presentation was "Architecture Imported through the Silk Road to China during the Thirteenth Century."

Finally, the third seminar was held on Friday, March 15 2019, led by Dr. Kaoru SUEMORI (Research Fellow, National Museum of Ethnology), who discussed "Chinese Buddhist Cave Sites from the Perspective of Architectural Space: With a Focus on the Mogao Caves in Dunhuang and the Maijishan Grottoes."

した。

第 1 回は 2019 年 3 月 7 日（木）に、講師：包 慕萍（Bao Muping） 氏（東京大学 生産技術研究所 協力研究員）による「風土・材料・工法：モンゴルの都市と建築」であった。

第 2 回は 2019 年 3 月 13 日（水）に、同じく講師：包 慕萍（Bao Muping） 氏（東京大学 生産技術研究所 協力研究員）による「13 世紀のシルクロードから中国へ伝来した建築」であった。

第 3 回は 2019 年 3 月 15 日（金）に、講師：末森 薫 氏（国立民族学博物館 学術資源研究開発センター 機関研究員）による「建築的空間から見た中国の石窟寺院 ―敦煌莫高窟・天水麦積山石窟を中心として―」であった。

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Re-thinking Basic Design Course in Architectural Education in Turkey

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Keywords: architecture education, basic design, Bauhaus, curriculum, design exercises, digital, pedagogy of design, preliminary course, twenty-first century.

Abstract: The aim of this study is to determine the current status and significance of Basic Design education in contemporary architecture schools in Turkey to contribute in developing new course content and teaching methodology that keeps up with the necessities of the rapidly changing world of 21st century. Taking its origins from the Bauhaus, the Basic Design course still maintains its significance in the Turkish architecture schools. Due to technological developments, some experimental approaches started to be appeared to integrate digital technologies and computational thinking into the course curriculum. In order to reveal the status of the course, by using literature review and statistical data, history of the Basic Design course, the technological and generational changes of the 21st century as well as their effects on the course, the characteristics of the course in contemporary Turkish architecture schools, and some experimental approaches to the course will be presented throughout the study.

1. Introduction

Originated from 'Vorkurs' (Preliminary Course / Foundation Course) of the Bauhaus, after 100 years, the Basic Design course still continues to preserve its importance in architectural education. It is the first design course where prospect architects encounter with design problems and start to develop a sensitivity towards visual language by focusing on design elements and principles (Acar, 2003). 'Vorkurs' was initiated at Bauhaus in 1919 after Johannes Itten's proposal about a trial semester for the enrolling students was accepted by Walter Gropius (Itten, 1975). The course was taught first by Itten, later by Lázsló Moholy-Nagy and Josef Albers, each of whom had different approaches and concerns in terms of education. For instance, Itten used "creative automatism" whereas Moholoy-Nagy introduced a more scientific based problem-solving approach (Wingler, 2015).

Following Bauhaus, the Hochschule fur Gestaltung, Ulm, tried to create a more scientific basis for the beginning design education with more emphasis on social responsibilities (Farivarsadri, 1998).

With its universal and abstracted education, the New Bauhaus in Chicago also shared the same ideals with the German Bauhaus (Acar, 2003).

The structure of the Basic Design education in Turkey can be interpreted as the continuation of the Bauhaus pedagogy (Makaklı & Özker, 2016). Since many years, the structure of the Basic Design course in architecture programs in Turkey has reflected the concepts of the Bauhaus (Farivarsadri, 1998). In 1979, Denel (1979) stated that: "Basic design needs to be designed for the needs of today's architectural students."(p. 16). It has been 40 years since Denel's dissertation and it is seen that the Basic Design course still needs to be restructured to serve the needs of today's architecture students. The world changes continuously, so do the generations and students. Despite these changes, the traditional teaching methods and contents of the Basic Design course have not been questioned sufficiently.

The review of related literature revealed that few studies in Basic Design course structure and teaching methods for first-year architecture students have been conducted. Johannes Itten's "Design and Form" first published in 1964 and since then used as the most important reference book in the field. Other Bauhaus teachers also wrote books about their understandings of the foundation course. Pedagogical Sketchbook, written by Paul Klee in 1972, and Point and Line to Plane, written by Wassily Kandinsky in 1926, are some other examples. Another important book about Basic Design is written in 1972 by İ. Hulusi Güngör with the heading "Temel Tasar" and still being used as a reference book by the Turkish Basic Design educators. Though it covers the subjects taught in Basic Design courses, there is a lack of information about the methods of teaching. Another important source is again a dissertation written by Bilgi Denel titled "A Method for Basic Design" which was written 40 years ago in 1979. Denel's work focuses mostly on the assignments rather than the structure of the Basic Design course. Another significant work is the Ph.D. dissertation written by Nuri Temizsoylu in 1972 in London entitled 'The Background and Development of "Basic Design" Concept', which concentrates more on the historical development of the course rather than its contents. Though there is a significant number of articles found in the literature, they mostly focus on the works done in the Basic Design course, not on the structure of the course or the teaching methods. As Boucharenc (2006) mentioned in his article, there is still a need for further research in the field of Basic Design education.

Review of the current literature shows that few studies in Basic Design course content and teaching methods for first-year architecture students have been developed. Therefore, the aim of

this study is to determine the current status and significance of Basic Design education in contemporary architecture schools in Turkey to contribute in developing new course content and teaching methodology that keeps up with the necessities of the rapidly changing world of 21st century.

The procedure related with the method applied is as follows: First, the programs of architecture were determined based on the information declared in the Higher Education Program Atlas published on the official website of the Council of Higher Education in 2017. Then, the curriculum information and the syllabi of the first-year design courses of the determined architecture programs were gathered from the Undergraduate ECTS Information Guides published in the official websites of the universities. Afterward, all the data gathered were transferred to KoBoToolbox in order to transform the information into statistical data. Meanwhile, a theoretical study based on literature reviews was conducted to form a solid basis for the research.

In that regard, in the second Chapter, the execution and evolution of Basic Design education in historical context will be examined. In the third Chapter, the requirements of the course considering the technological developments and the generational change in 21st century will be discussed. In the fourth Chapter, the history and the current status of Basic Design education in the programs of architecture schools in Turkey will be investigated and some experimental case studies will be presented. And in the fourth Chapter, the findings of the study will be evaluated.

2. History of Basic Design Education

Present day applications of Basic Design education are either development of or reactions against the previous models executed in the history of architectural education (Farivarsadri, 1998). Since all the contemporary systems of Basic Design education are based on theories and methods applied in the past, in order to understand the current approaches to Basic Design education thoroughly, it is necessary to make a historical review of the subject. Considering the fact that a comprehensive historical review of the subject matter is beyond the limitations of this study, the most influential schools of architecture in the development of Basic Design education will be accentuated. The schools of architecture focused on in this study to examine the historical evolution of the Basic Design education are determined according to the "three historical embodiments of the archetype" put forward by Findeli (2001), that are Bauhaus, New Bauhaus, and HfG Ulm.

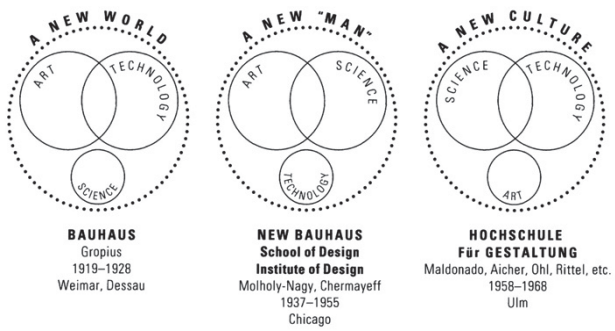

Figure 1. Three Historical Embodiments of the Archetype (Findeli, 2001)

2.1. THE BAUHAUS

The history of Basic Design education dates back to *Vorkurs* (Preliminary Course) of the Bauhaus (Özkar, 2017), which was founded by Walter Gropius in 1919 in Weimar, Germany (Bayer, H., Gropius, I., & Gropius, W., 1938).

Gropius published the program and the manifesto of the Bauhaus, also knowns as Staatliche Bauhaus, in April 1919 as a four-page leaflet where he states the aim of it as to collapse the barricades between the artist, craftsman, and the architect by bringing them together (Wingler, 2015). In order to achieve his goal, Gropius invited celebrities to teach at the Bauhaus, and these celebrity collaborators of the Bauhaus differentiated the school from its contemporaries (Dearstyne, 1986).

Since the incoming students of the Bauhaus were expected to have studied basic concepts of art before (Moynihan, 1980), a Vorkurs-like fundamental course was not included in the foundational program of the Bauhaus declared by Walter Gropius in 1919 (Wingler, 2015). But throughout the first semester, it was observed that though having art education previously, the incoming students were still insufficient in perceiving fundamentals of form and creating innovative works.

Therefore, after the first student exhibition, Gropius decided to set up a fundamental design course to solve the encountered problems of the students related with form and creativity, and he began to seek a master who could be responsible for that kind of course (Moynihan, 1980). Eventually, Johannes Itten was invited with the advice of Gropius' wife, Alma Mahler, and started to teach at the Bauhaus (Itten, 2002).

The pedagogy of Johannes Itten, who was a teacher and painter, was the combination of the ideas of Froebel, Montessori, Cizek, and Pestalozzi (Lerner, 2005; Wick 2000). Deeply affected by the thoughts of these names, Itten proposed a compulsory trial semester for each and every applicant of the Bauhaus. Following his proposal's acceptance by Gropius, the Basic Course was introduced in the Fall of 1919 with a duration of six months (Wick, 2000). By means of the preparatory course called 'Vorkurs', 'Preliminary Course', 'Foundation Course', 'Basic Course', etc., which formed the backbone of the teaching philosophy of the Bauhaus in the following years, Itten made his enduring contribution to Bauhaus (Wingler, 2015).

In the Statutes of the Staatliche Bauhaus, the contents of the Basic Course were explained as form training as well as the experimental material studies conducted in the craft workshops (Wingler, 2015).

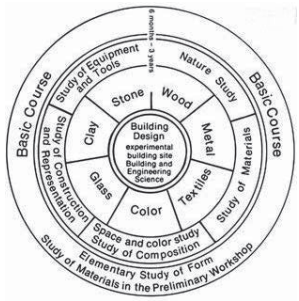

Figure 2. Syllabus of the Weimar Bauhaus, 1923 (Itten, 2002)

According to Itten, the main problem of teaching art was to evoke the individual expression within each student in order to expose their creativity (Itten, 2002). Influenced by the warm-up exercises of Hölzel, who was a professor at the Academy in

Stuttgart where Itten had studied, Itten introduced these exercises preceding the day's assignment to make the students relaxed, to prepare them for the subsequent rhythmic works, and to improve the students' eye-hand coordination (Wick, 2000).

The composition was taught in the Basic Course of Itten via two significant exercises. The first one was experimenting and constructing three-dimensional works with a special emphasis on different forms, textures, and materials, then, transforming them into two-dimensional drawings by concentrating on the contrasts considering the concepts of form, proportion, color and rhythm (Itten, 2002; Whitford, 1984). The second required the structural analysis of the works of old masters considering the linear composition, three-dimensional relations, and light-dark proportions within the painting in order to catch the expressive creative essence of the original work (Whitford, 1984; Wingler, 2015). While the Preliminary Course of Itten was evaluated by the critics as menticide causing the dismissal of previously gained knowledge or skills of the students, the course was considered by its defenders as the freeing of the creative potential which was inactive within every single student (Whitford, 1984).

Though Itten's pedagogical approaches were striking at that time, due to his conflict with Gropius he resigned and went from Weimar Bauhaus in the spring of 1923. After the resignation of Itten, Josef Albers, who was a former student of Itten, was appointed to the material workshop of the Preliminary Course while Hungarian artist Lázsló Moholy-Nagy became responsible of leading the Preliminary Course (Wingler, 2015).

With his arrival at Bauhaus, Moholy-Nagy altered the characteristics of the Preliminary Course by abolishing expressionistic tendencies such as the empathy, emotional responses of the students and relaxation exercises prior to the course and carried it closer to the motives of Gropius in terms of the integration of design and industry (O'Sullivan, 2012). He placed the problem-solving at the center of the lessons. While material studies remained, intellectual and scientific development was accentuated in the Preliminary Course of Moholy-Nagy. The main concerns of Moholy-Nagy were space, laws of physics and structure, balance, light, transparency, opacity and kinetic energy. Therefore, while introducing a problem-solving approach by giving importance to the construction of space considering the laws of science, he drew the attention of the students to three-dimensional relations which form the basis of architecture and design (Wingler, 2015).

While Moholy-Nagy concentrated on the basic visual training of the students, Albers focused on the introduction of the real materials the students would be dealing with in their future such as "stone, glass, wood, metal, paint, and textiles" in his Preliminary Course and his students learned the different characteristics and usages of the materials (Wick, 2000).

One of the most significant examples of Albers' Preliminary Course was his studies by using paper. By shaping and folding the paper, the students of Albers learned that the typical characteristics of materials can be changed and the relationship between materials and forms can gain a new notion (Wingler, 2015).

The concepts concerned in Albers' Preliminary Course while analyzing materials are "dimensions (point, line, plane, space, volume), mass (proportion, rhythm, addition, subtraction), movement (dynamics, statics), energy (active, passive) and expression (light, dark, colour, matter)" (Wingler, 2015). Other main interests in Albers' course were surface and texture qualities of materials. The texture was related to the appearance of the material considering its visual and tactile qualities (Moynihan, 1980).

The Bauhaus relocated to Dessau in 1925 when a significant change also happened in the organization of the school. Each workshop was led by a design master and a practical instructor in Weimar. After moving to Dessau, a single master became in charge of each workshop (Gropius, 1965). While Albers was in charge of the first semester of the Preliminary Course, Moholy-Nagy was responsible for the course's second semester. (Wick, 2000).

After the resignation of Moholy-Nagy with Gropius in 1928, Josef Albers became in charge of both semesters of the Preliminary Course. When the Bauhaus moved to Berlin from Dessau, Albers stayed with the school and continued to teach the Preliminary Course until the closure of the German Bauhaus by Nazis in 1933 (Moynihan, 1980).

With the sudden closure of the Bauhaus by the Nazi regime in 1933, leading masters of the German Bauhaus emigrated to America, where they continued to spread the Bauhaus ideals at American schools. The translation of the Bauhaus pedagogy from Germany to America was made specifically "by Lázsló Moholy-Nagy at the New Bauhaus and at the School of Design, and, afterwards, at the Institute of Design, in Chicago, by Josef Albers Black Mountain College and at Yale, and by Walter Gropius at Harvard GSD" (O'Sullivan, 2012). As it was mentioned in the second Chapter, Chicago Bauhaus which is one of the "three historical embodiments of the archetype" put forward by Findeli (2001), will be examined in the following Chapter.

2.2. THE NEW BAUHAUS

The New Bauhaus was founded by Lázsló Moholy-Nagy in 1937 in Chicago. It was closed due to the financial problems in 1938 but with most of the members of the faculty, it was opened again under the name of "School of Design" in 1939, in Chicago. Later in 1944, its name was changed into the Institute of Design (Wingler, 2015). Since 1949, it has been incorporated into the Illinois Institute of Technology (IIT) (Wick, 2000).

Though Moholy-Nagy believed in the validity of the Bauhaus ideas, he also became aware of the fact that the content of the curriculum needed to be modified due to the scientific and technological developments occurring in America. Therefore, he made two important changes in the original curriculum. More technological arts such as kinetic and light sculpture, film and photography as well as music and poetry, which are not visual, integrated into the curriculum. Also, in addition to the two main ingredients of the Gropius' formula, which were art and technology, Moholy-Nagy placed science into the structure of the program. As a result, social science, physical, human and life courses entered into the school's program (Findeli, 1990).

According to Moholy-Nagy, by means of one-year preliminary course students can try their abilities, can experience themselves, can take brief training in the specific workshops and can have the chance to choose their future specializations carefully (Findeli, 1990).

Moholy-Nagy was interested in material experience, surface, space, and volume. He also believed that there is a necessity of universal purified language in order to talk about art like we talk about science (Wingler, 2015).

The Foundation Course outline was composed of two parts: "plastic elements (line, shape, color, texture, structure, volume, motion, space, etc.) and specific tools and materials used to create form (brush, pen, power tool, camera, pigment, paper, clay, wood, plastics, etc.). The students of the course were expected to be familiarized with both of them with the given assignments (Findeli, 1990).

The new Bauhaus was also sharing the same ideals with the German Bauhaus by being universal and abstract (Acar, 2003).

But founded on a more scientific and purified translation of the German Bauhaus, the pedagogy of the New Bauhaus was a more successful achievement of the former Bauhaus (Wingler, 2015).

2.3. HFG ULM

The Hochschule für Gestaltung (HfG), Ulm was founded in 1953 under the rectorate of Max Bill, who was a former student of Bauhaus. Though at first, HfG Ulm was led according to the Bauhaus principles, shortly the main fields of the studies became mass communication products, industrial designs, and buildings (Leopold, 2013).

Based on the Bauhaus pedagogy, HfG Ulm also offered an introductory design course called Grundlehre (fundamentals) which had to be taken by all the beginning design students (Spitz, 2002).

Being a former student of the Bauhaus, Max Bill invited Bauhaus masters such as Josef Albers and Johannes Itten as guest lecturers for the opening course which was in August 1953. In the first years of the school, between 1953 and 1958, pedagogy of the basic course at HfG Ulm's was based on the Preliminary Course of the Bauhaus. In this first phase of the course, it focused on the visual training, freehand drawing, and material experimentations, and the duration of it was one year at HfG Ulm (Leopold 2013).

In the second phase of the course, "Visual Methodology" was the leading field of the study. The main concern of the course was transformed in order to teach the students the design process in a conscious and controlled manner. This new course which would be called "Ulmer Modell" after, comprised "Perception and Gestalt Theory", "symmetry", and "topology" (Leopold, 2013).

The general structure of the course was composed of basic design theory, form, color, light, material studies as well as the discussions on social, political, cultural, and scientific topics of the day (Lindinger, 1990).

Focusing more on the social responsibilities, the Hochschule für Gestaltung (HfG), Ulm, attempted to formulate a more scientific approach for introductory design education in order to defeat the problems caused by the Bauhaus education system (Farivarsadri, 1998).

3. Basic Design Education in 21st Century

Due to the rapid developments in science and technology, an explosion of information has been experienced in the 21stcentury. Due to these developments, 21stcentury, also being called the information age or digital age, is different from the times where Bauhaus emerged (Dong, 2017). Although the pedagogy of the Bauhaus is still being applied in many contemporary design schools around the world after 100 years of its establishment (Boucharenc, 2006), there are important differences between the present-day students and that of the past century.

The generational characteristics of today's students could not have been explained clearly and thoroughly yet. They are given different names such as "Net Generation", "Digital Natives", "Gen Z", etc., considering the year of birth or their usage of technology. The skills, habits, inclinations, cultural qualifications, and learning styles of the generations born into the digital age are totally different than the older ones. In contrast to the older generations, today's students can receive information from an incalculable number of sources, and the influence of technology on the student profiles are undeniable (Büyükkeçeci, 2017).

In the last decades, technological advancements have also caused considerable changes in architectural practice particularly with the enhancing use of computer technologies (Doyle & Senske, 2017). In the beginning, computers were used mostly as a complementary tool for drawing and presentation but with the rapid development of digital technologies, they also started to be used as design tools (Ağırbaş, 2017). Especially digital fabrication and computational design tools enabled new designs that would not be possible to be realized without computers (Carpo, 2012). These advances in technology also affected architectural education as well as architectural practice (Norman, 2001). Due to the never-ending developments in digital architectural design, new necessities emerged in architectural education to answer the needs of the fast-changing architectural practice in 21stcentury. Therefore, computational tools started to be involved in the architectural curricula both as elective and compulsory courses either integrated into the design studio or stand-alone (Ağırbaş, 2017; Varınlıoğlu, Halıcı, & Alaçam, 2015).

Though it is inarguable for the scholars in the design field that it is a need to integrate computational tools into the architectural curriculum, when and how to teach these tools in architectural education is still being discussed among the scholars and professionals. Some academics argue that computational tools have to be integrated into architectural education after students get acquainted with a strong background with certain skill sets like hand drawing and physical model-making (Kara, 2015). On the other hand, some academics believe that how the first-year design students learn to draw and model from scratch, they can also learn to use digital media as design tools simultaneously. Moreover, they argue that integrating computational tools into the architectural curriculum as soon as possible starting from the first year enables the students to improve a more profound perception of the possibilities and constraints of these tools (Carraher, 2011).

Therefore, there are several studies conducted searching for pedagogical methods for integrating computational tools into the Basic Design curricula around the world.

One of these studies was conducted by Roudavski at the University of Melbourne in 2010, where the first-year students were asked to design and build paper sculptures with complex geometries to be worn on the head by using various digital and analog tools. At the beginning of their design process, students propose a concept for their headpieces. After this proposal, they develop three-dimensional forms by sketching and making models out of paper and clay. Then these hand-made physical models are converted into digital representations by using computational tools and their designs are developed with the help of digital modeling. Later these digital models are used to generate unfolded patterns of complex forms to be cut and digitally fabricated out of paper by using laser cutting robots (Roudavski, 2011).

Another study was carried out in the United States. During the 2010-11 academic year, School of Architecture + Design at Virginia Tech organized a series of workshops where first-year and upper-level design students from different design disciplines attended separately or together. One week lasting each workshop started with Rhino tutorials and later students were asked to accomplish different tasks. In one of them, students were expected to design within a 4" cubic volume by means of cutting, folding and scoring. After the students brought their designs, they were expected to translate them into Rhino commands and make iterations of their forms. Afterward, for two-dimensional fabrication, three-dimensional computer models were prepared and laser cutter was used (Carraher 2011).

As it is seen from the examples, they try to integrate computational tools into the Basic Design curricula by trying to balance the conventional tools with digital tools and

computational thinking during the design phase. Considering the issue of when and how to incorporate digital tools into the design curriculum the case studies introduced above are selected as samples from the world because they can be accepted as a few but important examples summarizing the common approaches which aim to respond to the 21st century requirements of the profession and education of architecture. Though the general tendency is like the cases presented here, there is still need for more pedagogical researches about the integration of the digital tools into design curriculum in order to meet the present and future needs of the profession.

4. Basic Design in Architectural Education in Turkey

4.1. HISTORY OF BASIC DESIGN EDUCATION IN TURKEY

Though it was mentioned in the article written by Esen, Elibol, & Koca (2018) that the Basic Design education as a course in Turkey first appeared at 'Istanbul Vocational State School of Higher Education', which is called Marmara University at present, in 1957 (Esen, Elibol, &Koca, 2018), the "first institutionalized Basic Design education" was executed by the Department of Architecture at Middle East Technical University in 1956 (Acar, 2003; Uysal, 2003). Later in 1967, at School of Fine Arts, known as Mimar Sinan University today, the first-year architecture and fine arts students started to take a compulsory common basic course which was influenced by the Bauhaus pedagogy (Bayındır, 1994). The main purpose of that course was to teach the first-year students the basic design elements and principles. The Bauhaus pedagogy also affected the education of other architecture programs in Turkey, and since then traces of it are seen in most of the Basic Design courses offered in the first year of architecture schools in Turkey (Farivarsadri, 1998).

4.2. CURRENT STATUS OF BASIC DESIGN EDUCATION IN TURKEY

According to 2017 data published by the Council of Higher Education, there are 87 universities offering architecture programs. 45 of these universities are state universities, and 42 of them are foundation universities. 2 of the state universities and 10 of the foundation universities offer architecture programs in both English and Turkish. So, in total, there are 99 programs in Turkey providing architectural education.

While the expression of "Basic Design" or "Design Fundamentals" are clearly mentioned within the curriculum of 88 % of these programs, 12 % of the design courses offered in the first semester of these programs are given different names such as "Design Studio 1", "Design", "Art and Design Studio 1", "Architectural Design 1", "Introduction to Architecture", "Introduction to Design", and "Introduction to Design 101".

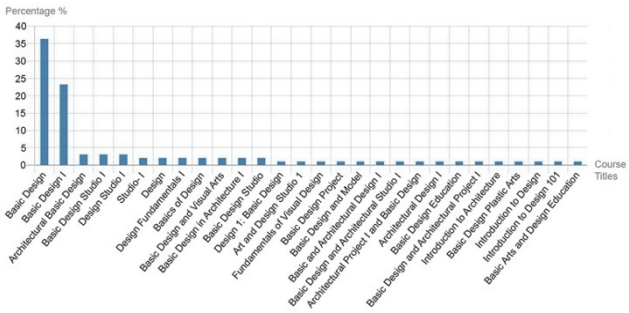

Figure 3. Titles given to the course in different programs

When the course descriptions, course objectives, and weekly course plans which are published in the official website of the schools are examined, it is understood that in 99% of these programs basic design elements and principles, which are the primary concerns of the Basic Design course, are taught. But the way how they are included in the curricula of the programs differ.

When the design courses offered in the first year of the architectural programs in Turkey are examined, it is seen that there are seven systems formulating Basic Design course. Either Basic Design course is offered alone throughout the first year in both semesters, or it is offered in both semesters with a simultaneously offered another design course, or it is offered for both semesters and another design course is also offered in the second semester, or it is offered in the first semester alone, or it is offered in the first semester with another design course simultaneously, or it is offered together with another design course, or it is not offered at all.

When the weekly course hours of the course are considered, data of the 97 programs out of 99 programs were reached through their official websites. Within the curricula of these programs, weekly hours of the Basic Design course are 8 hours (30%), 4 hours (21%), 6 hours (18%), 12 hours (9%), 3 hours (8%), 10 hours (7%), 9 hours (2%), 11 hours (1%), 2 hours (1%).

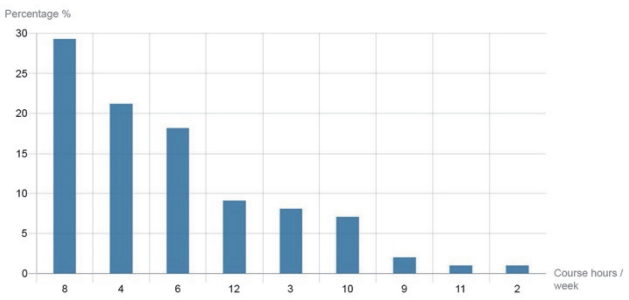

Figure 4. Total course hours per week

When the course weights/semester are analyzed, since 4 programs out of 99 programs have not published their total ECTS per semesters until the time of the writing, they are not mentioned in the following statistics. Other than these programs, in 15 of the programs the ECTS weight of the Basic Design course in its offered semester is 33%, in 13 programs it is 27%, in 13 programs it is 17%, in 10 programs it is 13%, in 9 programs it is 20%, in 8 programs it is 10%, in 5 programs it is 23%, in 3 programs it is 43%, in 3 programs it is 29%, in 3 programs it is 40%, in 2 programs it is 28%, in 2 programs it is 30%, in 2 programs it is 37%, in 1 program it is 22%, in 1

program it is 9%, in 1 program it is 15%, in 1 program it is 32%, in 1 program it is 50%, and in 1 per cent of them it is 47%.

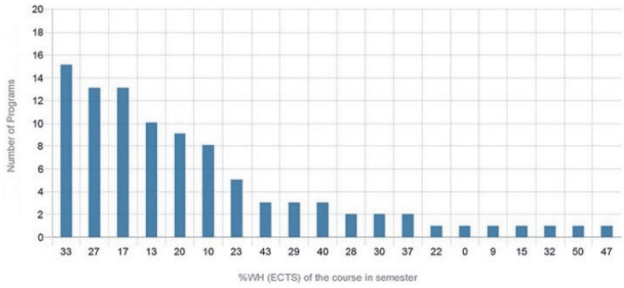

Figure 5. %Weight (ECTS) of Course in Term

4.3. EXPERIMENTAL APPROACHES

Through literature review, some case studies are selected to be introduced in this chapter. The samples are selected from the universities which are accredited, are within the top 20 schools in the ranking list according to the numerical data published by Higher Education Council, and give graduates at least since 2014. It should also be noted that the examples presented here do not include the entire studio workflow of the Basic Design courses offered in the selected programs. Instead of explaining the entire studio process, the following examples present short-term studio exercises applied at different universities meeting at the common point of integrating digital and computational tools into the Basic Design course while trying different methods. Due to the limitations of this study, the assignments will be summarized considering their different approaches to the subject matter.

Aiming to make the students acquainted with the concept of design computing at a school having well-protected traditional approaches to design, at the beginning of 2004-05 academic year's Fall Semester, Basic Design students of architecture at Middle East Technical University were given a two-week period exercise series where they were asked to follow a step-by-step procedure while designing in order to understand certain formal rules with reasoning. First, they were asked to take photographs of different positions of the body in front of the studio wall. In the second exercise, they were expected to arrange a 2D composition by using six of the photographs. In the third exercise, in order to make these photographs gain geometric characteristics, they were asked to draw lines on them. In the next exercise, by using black and grey paper the drawn lines were translated into planes. In the following exercise, a 2D composition was made by using thirteen elements taken from the previous exercise. In the subsequent exercise, a 2D composition was made on a square background by using three of the elements. And in the last exercise, a new square was made by placing nine of the squares from the previous exercise. During the exercises, the students noted the progression and changes in their design thoughts by comparing their works with their classmates throughout the discussions held in the studio at the end of every single step. At the same time, compared to the traditional approaches to Basic Design education, they became more conscious of their reasoning paying attention to the visual rules by being encouraged to explain their design process verbally. This study also differs from the other cases by integrating computation concept into the design curriculum without using any digital tool (Özkar, 2005).

Targeting to overcome the difficulties faced by the students in creating varied design alternatives by using fundamental geometries taking the defined principles of design into consideration, in 2012 Yavuz and Yıldırım presented a case study which was conducted with Basic Design students of architecture at Gazi University. For this study, "user-participated artificial intelligence software" and algorithms by using 3DS Max Script were developed by the instructors of the Basic Design course. The case study consisting of two stages lasted for 4 weeks. In the first stage, the Basic Design students were asked to form a composition composed of 5x5, 3x3 cubes, spheres, prisms or cylinders considering "repetition, unity and rhythm" principles by using traditional drawing methods. In the second stage, students were given 5x5, 3x3 cubes, cylinders with the radius of 5cm and height of 20cm and a sphere and they were asked to form alternative compositions out of them by using the script. At that stage, the necessary information to use the software was also given to the students. As a result, when compared to the traditional approaches, it is observed that the software made more contribution to student's design thinking, problem-solving abilities, and their creativity while enabling them to create diverse design alternatives as solutions to the given problem in a freer way (Yavuz and Yıldırım, 2012). Unlike the previous example, focusing more on software development and usage, this case presents another approach for integrating digital tools to Basic Design education.

Having the intention of integrating computational thinking and latest technologies with material knowledge, geometry and hands-on learning, at the end of the Fall Semester of 2017-18 academic year, students of computation-based Basic Design studio at İstanbul Bilgi University were asked to work in groups and to design and construct a lantern which is suitable for outdoor conditions and they are given five weeks to complete the project. During the development of designs, students were expected to investigate and concentrate on the properties and performances of materials, geometrical relations, and interlocking details while considering light, shadow, transparency and reflection properties together with the basic design elements and principles which are discussed in the preliminary exercises throughout the whole semester. Parallel to this final assignment which is given in the Basic Design studio, students are enabled to experiment and fabricate the components of their designs by using different materials with the help of the tutorials provided in the Design Geometry course. Using polyhedra as a reference, students research materials and joint details and make hands-on experiments in order to achieve the determined particular geometric shape with the appropriate materials and joint details. After experimenting with diverse materials having different transparencies, the students use different materials such as polypropylene sheets, aluminum sheets, and aluminum mesh sheets and fabricate the components of their designs using different techniques such as CNC cutting or vacuum forming depending on their material choices for their final products. As a result of this study, the students became capable of creating different geometric forms by means of computational design accompanied with hands-on experience based on material knowledge (Gündüz, Oral, & Yazar, 2018). Different from the previous examples, this study focused more on the material knowledge and the results of the student works reveals the integration of the computational tools into the curriculum more explicitly.

5. Findings

The study reveals that Basic Design course and its contents are offered in 99% of architecture schools in Turkey under different names either as a stand-alone design course or as integrated into another architectural design course in the first-year curriculum. The study also presents that Basic Design education, adopted from Bauhaus initially, continues to be valid and influential in contemporary architectural schools in Turkey. The course hours and their weights within the curricula also show the importance given to the course in present-day architecture schools in Turkey.

The study also exposes that the instructors of Basic Design course, both in Turkey and in other countries, have already started to search for alternative methods to include computational tools into the design curriculum by means of experimental approaches. The selected experimental case studies mentioned above, except the one conducted at Bilgi University, can be considered as preliminary studies reflecting the informal attempts of integrating computational and digital design approaches into the first-year design curricula of different architectural programs by using different methods.

While in the case of Gazi University, user involved computer-based design tool generating various alternatives by bringing the basic geometrical shapes together according to defined design principles is offered, in the case of Middle East Technical University, by integrating design thinking and computing into the Basic Design education, a different approach is proposed by Özkar showing that design computing can be made without computers. On the other hand, by founding the Basic Design course from the beginning as a computer-based course, İstanbul Bilgi University provides a special curriculum which presents the integration of computational design thinking and hands-on making giving emphasis to the experimentation with different materials.

All the cases explained in this study show that it is possible and necessary to integrate the computational tools into the design curriculum in different levels depending on the infrastructures of the schools while still going on to utilize the main concepts of traditional Basic Design education inherited from the Bauhaus. These examples can also be accepted as evidences revealing the necessity of revising the current Basic Design curriculum to fit the needs of both the architectural profession under the influence of 21st century technological developments and the profiles of the current and future students belonging to different generations who have and will have different characteristics especially in terms of their relation with technology.

6. Conclusion

It is obvious that in the 21stcentury, students require to be made ready, starting from their first-year design studies, by being equipped with necessary technical skills in order to create solutions for the real-life problems occurring at present and will occur in the future. Being the first design course where architecture students encounter with design problems for the first time, Basic Design course still preserves its importance and validity in Turkish schools of architecture. Due to the rising usage of digital tools in the architectural profession, a necessity of incorporating digital design tools into the curricula of first year Basic Design courses emerged in order to fill the gaps between the traditional architectural education and needs of the 21st century architecture profession. Parallel to the changes occurring in 21st century, also the new generation student profile has changed. Therefore, architectural pedagogy needs to be reconsidered in terms of the requirements of the 21stcentury. The general picture of the current status of the Basic Design course in Turkey drawn in this study is hoped to be utilized in designing a new Basic Design course curriculum according to the current and future needs of the profession and education considering the necessities of the new generations and the 21stcentury.

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Comparison of the "Oki-gotatsu" in the Traditional Japanese House and the "Kürsü" in the Traditional Harput House

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Keywords: Japan, kotatsu, oki-gotatsu, Turkey, Anatolia, Harput, kürsü, table, heater

Abstract: The use of the wooden low table "kotatsu" in the center of the traditional Japanese house in the seventeenth century (Edo (Tokugava) period), the oki-gotatsu, is similar to the use of the wooden low table in the traditional Harput house, the "kürsü". The "kotatsu" and the "kürsü" used in winter in both places with similar climate characteristics are the table usage, which is collected around the place and where the warm-up needs are met. The origins of these similar uses in the traditional Japanese house and the traditional Harput house, located in different and distant geographies, can be traced back to Central Asia. In this study, the shape and use characteristics of "oki-gotatsu", a form of traditional Japanese house in the past, and the shape and use characteristics of the "kürsü" in the traditional Harput house are compared.

1. Introduction

In this study the traditional Japanese house wooden low table "kotatsu" is compared with the traditional Harput house "kürsü" known from Turkey. The similarity of these two draws attention. Their uses not only meet the need for heating in cold-climate environments, but they also integrate the use of tables with other indoor furniture.

As Japan extends for about 3,000 km in the north-south direction, the country's climate varies from region to region; a multitude of natural environments can be observed due to the country's spread over many degrees of geographical latitude and the effect of various landforms, most of which are mountainous .(Keskin, 2012: 59) In the North the summer is warm and short, whereas the winter is long and very cold. In the central area summers are hot and humid, whereas winters are short. In the southwest the summer is hot, humid and long, and the winter is warm. (Hee-Soo: 570) For all of the country the climate is cold and harsh in winter, because of the continental cold air masses coming from Central Asia. (Büyük Larousse Sözlük ve Ansiklopedisi, "japon", vol: 12: 6054) Japan's position between the ocean and the Asian mainland is one of the main factors that determines its climate. In addtion, the characteristics of the local and regional topography produces local climate differences. In the mountainous interior for example, the temperature can drop considerably on short notice. (Ana Britannica, "Japonya", vol: 17: 211)

Kotatsu is the traditional center of life in Japan during the winter months. In the evenings, family members gather around kotatsu and keep the lower half of their bodies warm with kotatsu while eating, watching TV, playing games and enjoying commune (http://en.wikipedia.org/wiki/Kotatsu). Even until today in many houses in winter, the Japanese people prefer to sit in cushions around kotatsu. (Şenavcu, 2006) (Dündar, 2011)

Harput settlement in the Anatolian part of Turkey is an ancient winter city founded in rocky terrain at high altitude. The area is exposed to northern and southern air currents and dominated by a cold climate, which makes life conditions difficult. (Kahraman, 2010) Continental, polar-like air masses originating from the inner parts of Asia move southwest before entering the Harput area. This cold winter air mass is dry and is pulled up during spring time with occasional heavy precipitation released in the area. Harput settlement, on average 500 meters higher than the low areas around the Harput plateau was founded for defense and protection and to give Harput advantage against the harsh and cold climate. (Öztürk and Coşkun, 2014) During the winter months and due to the difficult and long winter nights Harput houses were heated with "kürsü". (Karkın and İmik, 2010) (Kara, Karabulut, Demirdağ, Özmen, 2007) Apart from the stove and grill some houses used methods such as the tandoor for heating the traditional Harput house. (Kahraman, 2010) Homeowners and guests would sit around the mangal and warm up. The aim was to warm up the person, not the room. (Yünkül. 2005)

Still, the table usage "Kotatsu" in Japan and "kürsü" in Harput, also included the need for heating. Both are traditional home interior furniture.

"Kotatsu" and "kürsü" are used for sitting on the ground with crossed legs. For this reason, the main room of the house, where the family gathered in the traditional Japanese house, goes along with a washitsu (https://en.wikipedia.org/wiki/Washitsu) meaning there is wooden made low table in the middle of the room. In the traditional Turkish house, the seating conventions depend on the ground. As in much of Asia, the Turkish house required the use of a carpet on the floor, where it was possible to establish a bond on the ground, to kneel down, and also to have the bed arranged on the ground. It allowed to walk comfortably on the soft carpet where the rug laid on the pavement. Daily work has been done on this floor. (Erdinç, 2009) The meals also were takings place on the ground. This habit was born of as a nomadic style and strengthened with the habit of eating comfortably. The

habit of nomadic life still continues in Anatolia until today. (Erdinç, 2009) As a necessity and part of the habit of nomadic life, the most important feature of the rooms in the Turkish house is the multi-purpose use. You can sit in every room, work, eat, sleep, wash. The biggest factor that enables this is that mobile equipment (furniture, goods) is used. When necessary, the items are placed in the center of the room, after use, they are put back in place. For this purpose, the central area of the room was left empty. (Sayın, 2014)

In the traditional Japanese house, there is also a multi-purpose use of the room. However, the only furniture in the center of the room and which makes it a special case of the Japanese house, is the wooden table. (Dodd and Richmond, 2001) This table is especially the "kotatsu" in winter times. If necessary, it can be replaced with other uses for some period; meaning it is eliminated or replaced by something else.

The "kürsü", which meets the need for heating and has been established as the "kürsü" tradition in Harput, started from Central Asia and is a tradition that started with the Seljuks and Ottomans in Anatolia and lasts to the present day. With the arrival of the Turks in Anatolia in the thirteenth century and the transition to city life until modern times artisans came together in the organisation of "Ahilik" to bring the people together in unity, fellowship, friendship, solidarity, love, respect, hospitality, music and games, and to organise commune meetings where elements such as the "kürsübaşı" have become an essential component. (Akbıyık, 2004)

During the day, people around the house gather at the kürsü, and during nights, it would be allocated to the guests. The order has been decided in advance, with each night it was held on the kürsü of a particular house. On long winter nights, there were held gatherings by age groups at the beginning of the "kürsü", which was almost the only entertainment of Harput people. In the "kürsübaşı", legends, tales, riddles were sung, jokes were made, ring games were played. At the end of the game, the loser was punished, heavy jokes were made. (http://www.habitat.org.tr/kultursanat/816-kursubasi.html)
During the musical and entertaining meetings, known as the "kürsübaşı" around the "kürsü", the stories of the people and the issues that have an important subjects in cultural life were discussed. (http://www.habitat.org.tr/kultursanat/816-kursubasi.html)
(http://www.elazigkulturturizm.gov.tr/TR,96038/kursubasi-gelenegi.html) The tradition of commune, together with Harput music, constitutes a cultural feature. (Erol, 2012) In Harput, the "kürsü" became a social tradition and meetings were held around the "kürsü"; those meetings were called "kürsübaşı". The assembly was held in the biggest and most beautiful room of the traditional Harput and Elazığ house, where the mangal was brought to the center of the room and the "kürsü" was placed on the mangal with a wooden table, the "kürsü" itself was laid on the top of the quilt or blanket. In the "kürsü", music was performed on religious and contemporary issues. (Yünkül. 2005) (Erol, 2012) (Fig. 1)

Fig 1. In Harput, the tradition of "kürsübaşı" (http://www.elazigkulturturizm.gov.tr/TR,96038/kursubasi-gelenegi.html)

The harsh winter climate in Harput has been a factor shaping the traditional house, and Islam's privacy has been effectively supportive, too. (Yünkül, 2005) In this use, the concept of introversion, based on Central Asian beliefs and nomadic life, was also effective. (Erdinç, 2009) The other result of Islam on the traditional house is the separation of places according to gender. (Ekici, 2004) Foreigners and guests from outside were welcomed in the "selamlık" section reserved for the use of men. Therefore the large and spacious room of the selamlık section was reserved for the guests. In the traditional Turkish House this room called "başoda" is also called "Şahnişin" (sohbetçi) room. This room was more flashy than any other room and its ceiling was high. In addition to being the place where the head of the family was sitting and accepting the guests, these rooms were used like any other rooms in daily life. (Yünkül, 2005) Harput houses are open to the outside including the rooms where guests are accommodated and the rooms that establish the connection between the street and the house. Therefore, these rooms are placed at the front side of the house facing the street, in a position that dominates the view, and where guests usually come out passing through the "şahnişin". These exits are made larger as both in the number of windows and the size of the window, making in Harput the relationship between the house and the outside specific. In these windows, blinds or latches were used to protect the sanctity and privacy of the house. (Kahraman, 2010) The origin of the "başoda" (köşkoda), which is located in one corner of the sofa or on the roof, is the old Turkish tent where close friends gather and commune. (Yünkül, 2005)

Contrary to the widespread practice in Anatolia, in the traditional house in Japan there are no home gatherings or home visits. (Erdemir, 1993) (Keskin, 2012)

The use of the traditional Japanese "oki-gotatsu" in the development phase of "kotatsu" is seen similar with in the "kürsü" in the traditional Harput house. These solutions appear to be similar traditional solutions used under similar climate conditions.

1.1. "OKİ-GOTATSU" IN THE TRADITIONAL JAPANESE HOUSE

Kotatsu; it is a general statement that refers to the use of the heat source with the table. This use is the result of a development that takes hundreds of years to reach its today's use. When developed and diversified in this process, Kotatsu had different names that express their particular characteristics in order to qualify the differences between the various uses. However, although there are differences between them, they can all be expressed as "kotatsu" in general.

The main furniture of the traditional Japanese living room "washitsu" is a low table on tatami ground. Around the wooden low table known as "kotatsu" where the family meets for meal and welcomes guests for sitting, cushions called "zabuton" or legless chairs called "zaisu" are located. (https://en.wikipedia.org/wiki/Washitsu) Kotatsu is an interior furniture where the use as a heating source is combined with using it as a table. (Gill, 2004) The heat source's container is made of wood and located under the table where a mattress or a heavy blanket covers the bottom which is overlain by a quilt that covers the table. (McMillan, 1996) Kotatsu is covered with a thick cover and prevents the heat from dissipating. During the cold winter days the family members wear thick clothes around kotatsu putting their legs under this cover. (Şenavcu, 2006)

The place of kotatsu is the centre of the traditional Japanese house and with the development and change of Japanese type heaters over time kotatsu's heat source has reached its modern

form after undergoing some change and development. (Gill, 2004) Kotatsu is a result after centuries of development, which has been transformed into a modern interior furniture, starting from the traditional hearth, which provides the cooking and warm-up function at the center of the traditional Japanese House located called “irori”. At kotatsu the use of the heat source gained portable properties during this development and is called “oki-gotatsu”.

In the seventeenth century (during Edo) kotatsu was known as hori-gotatsu (http://en.wikipedia.org/wiki/Kotatsu). It it was used as a wooden set around irori, which was excavated in a square shape. Mattresses were laid out on the wooden set to keep the legs warm. (http://en.wikipedia.org/wiki/Kotatsu)

Hori-gotatsu, based on the concept of a mobile kotatsu in the eighth century (Nara 710-745 AD) (https://en.wikipedia.org/wiki/Nara_period), developed as a heat source and was an open charcoal mangal called “Hibachi”. (Doi, 2014) (Hanley, 1997) Thanks to the movability of the mangal the source of heat was portable. (Ohnuki-Tierney, 1994) (Fig. 2) Hibachi was used for individual use, because it was warm only near it and cool when moving away from it. (Nesbitt, 2007) This is why only hands could warm up when using a hibachi. In this heat source, heat was supplied using charcoal in a large pot. (Kaylor and Kaylor, 2007) Over time, the use of kotatsu has gained a portable feature thanks to the combination of the portable feature of hibachi, which is advantageous in heating, with the new function of seating around it, which has started to be shaped in “irori”. Another portable heating tool was the hot coal reservoir used to heat the feet and which was called “anka”. (Fig. 3) It likewise belongs to the portable kotatsu. (Hanley, 1997) Thus, the coal fire in irori, a source of heat that came in from the past, was placed in a soil pot and became portable. In this way kotatsu became “oki-gotatsu”, which remains unchanged until modern time. Oki means docking, ko means fire, tatsu means hot feet and by today's modern use of kotatsu the use of the heat source in oki-gotatsu has been converted to an electric heater. (http://en.wikipedia.org/wiki/Kotatsu)

Fig 2. Portable hand mangal “hibachi”. A primitive “hibachi” used before the Edo or Tokugawa era, Fukagawa Edo Museum (http://en.wikipedia.org/wiki/Hibachi)

Fig 3. Portable foot-stove “anka” (https://www.jappleng.com/culture/articles/jp-culture/406/what-is-the-kotatsu-and-horigotatsu)

In oki-gotatsu, two types of heat sources were used over time. The first is the type, in which a mattress is laid on the table and the heat source in the pot is made of clay, is placed under the table and can be carried away. In this type, a finer mattress (futon) is laid on the table. The second one is a table that is placed on a thicker mattress laid on the floor, with the heat source under the table. A second heavy blanket called “kotatsu-gake” is laid on the blanket called “shitagake”, which is usually laid on the table. Kotatsu-gake; is usually decorative and designed to fit the decoration of the house. In summer, the blanket on the table is removed and without the heat source the kotatsu is used only as a table. It is also possible to sleep under kotatsu. However, it is appropriate to use the heating elements for a short-term rest, which we call -nap-, rather than for long-term sleep, because of the risk of burn associated with accidental damage. Children and pets like cats can sleep under kotatsu. In Japan of today kotatsu still is the center of life in the some homes in winter. In the evenings family members gather around kotatsu and heat until up the lower half of their bodies and their legs, if they want to up to the chest, while gathering around it for eating, watching TV, playing games and commune. (http://en.wikipedia.org/wiki/Kotatsu)

1.2. “KÜRSÜ” IN THE TRADITIONAL HARPUT HOUSE

The “kürsü” in the “selamlık” section of the traditional Harput House is a low table made of wood, which is used for sitting on the floor. Ground height is 50-60 cm. The "kürsü" is a square table resting on four wooden legs, which can reach up from 60 cm to 1.5 m on one side. Cushions are located on the floor level around the table. The heat source of 30-60 cm in diameter is placed in the middle of the mangal under the table. According to the size of the kürsü a pot, which is made of straw and sticky mud, is placed underneath. Apart from those who were sitting around the kürsü, there were copper vessels to warm water. In some villages, there were empty kürsües surrounded by mudbrick on four sides and laid out with egg shells. It was placed in the middle of this kürsü and covered with charcoal. The charcoal fire, which burnt in the open air and usually in the cookers, was put into these grills using a "carıt" (fire shovel) and it was covered with ash to keep the warmth for a longer time. Depending on the cold temperatures from outside, this fire kept the kürsü warmth for 10 to 12 hours allowing to warm those persons around it. On the ”kürsü", the inner face is red-coloured and flat, the outer part of it is covered by large quilts made of cloths with flower decoration. Feet, legs and arms are placed under these quilts and the quilt of the kürsü is pulled up to the chest. Those who were sitting around the kürsü heat up like this. (http://www.habitat.org.tr/kultursanat/816-kursubasi.html) (http://www.elazigkulturturizm.gov.tr/TR,96038/kursubasi-gelenegi.html) (Fig. 4)

Fig 4. “kürsü” and “mangal” in a traditional Harput house, from Harput Şefik Gül Kültür Evi (photo: İlknur Yüksel Schwamborn)

The mangal in the middle of the room is placed under the kürsü, with a comforter or blanket laid on the kürsü. The house party and the guests became warm by sitting around the kürsü. The goal was not to warm the room, but to warm the person. (Yünkül. 2005)

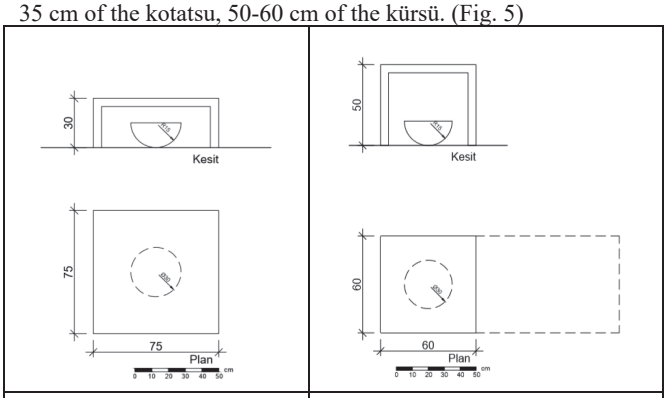
The house party gathered around the “kürsü” during the day and it was allocated to the guests at night. Each night, after prior decision the guests gathered at and around a kürsü of a particular house. This usage has become a “kürsübaşı” tradition thereby gaining social content. Next to the warming function of the heater the “kürsü” served as community meeting place, where to learn and to entertain with social content. (http://www.habitat.org.tr/kultursanat/816-kursubasi.html)

1.3. COMPARISON BETWEEN “KOTATSU” AND “KÜRSÜ”

Kotatsu and kürsü are located in the common living area of traditional Japanese and traditional Harput houses. However, under the effect of the privacy brought in by Islam to Anatolia, the place of the “kürsü” is reserved in the “selamlık” section for the use of men only.

The living room, covered with tatami wicker floor in Japanese house, is the meeting place of the family members. The family spends most of its time here. In the middle of this room there is a large blanket under the “kotatsu” and a heater under its and cushions around its. (Şenavcu, 2006) In the Anatolian Turkish house's ground the walking ground in the room is mostly covered by carpets, rugs and wicker textiles. From time to time felt is used. One of the important factors in the formation of this kind of floor cover is that the Turks sat on their knees and prayed on the ground. (Yünkül, 2005) In Japanese society for comparison, people sit with their legs crossed. (Locher, 2013) (Güvenç, 2010)

Kotatsu and kürsü can also be examined in terms of their shape and technical features; the plan dimensions of oki-gotatsu are as follows; approximately 75 x 75 cm, one edge of the kürsü table is raised above ground from 60 cm up to 1.5 m, it is four-legged. Both, kotatsu and kürsü, are made of wood and have a square-shaped table. (http://www.habitat.org.tr/kultursanat/816-kursubasi.html) Considering that this table has become a part of musically social activities in Harput it is understood to grow according to the number of people. Elevation above ground is 30-35 cm of the kotatsu, 50-60 cm of the kürsü. (Fig. 5)



oki-gotatsu in Japan	kürsü in Harput

Fig 5. Comparison of oki-gotatsu and kürsü (drawing: Ilknur Yüksel Schwamborn)

In oki-gotatsu coal was used for fire and wood was used in kürsü.

2. Conclusion

The use of a heated table in the traditional Japanese house known as kotatsu in the Edo period (1603-1867) (Ana Britannica Ansiklopedisi, “Doğu Asya sanatı” cilt: 10, s: 254) is similar to the use of “oki-gotatsu”. It has a similar use like a “kürsü” in the traditional Harput house.

In the traditional Harput house a "kürsü" and in the traditional Japanese house a “kotatsu” are common living spaces, which are the centre of the traditional house. Both have been the center of life in winter in the traditional house.

While the use of “kotatsu” in Japan was more private for the use of family members, the use of the “kürsü” in Anatolia was used among family members, but also was a part of social meetings with guests. For this reason, the place of the “kürsü” has been the “selamlık” section that is reserved especially for men in the traditional house. (Öztürk. 2008)

The reason that the dimensions of kotatsu and kürsü are different from each other is because they are shaped according to the ergonomic characteristics of Japanese and Turkish people.

Coal was used in kotatsu and wood was used in kürsü.

Oki-gotatsu is a usage that corresponds to the Edo period in this development. It depended on the changing heat sources during the period of kotatsu usage. Innovation continues until today and thanks to improvements kotatsu is still being developed and continuously be used in Japanese society. Kotatsu turned into an electric heater installed under the table today. The use of the kürsü in the traditional Harput House is abandoned today.

The origin of the similarity “kürsü” of the traditional Harput house and the "kotatsu" in the traditional Japanese house is traced back to Central Asia.

As a result, similar uses seen in two different societies in the past according to similar climate and cultural characteristics have been affected differently in the face of Westernization.

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Comparison of the "Hori-gotatsu" in the Traditional Japanese House and the "Kürsü" in the Traditional Divriği House

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Keywords: Japan, kotatsu, hori-gotatsu, Turkey, Anatolia, Divriği, kürsü, table, heater

Abstract: The use of the wooden low table "kotatsu" in the center of the traditional Japanese house in the fourteenth century (Muromachi period), the hori-gotatsu, is similar to the use of the wooden low table in traditional Divriği house in traditional Turkish Anatolian house, the "kürsü". The "kotatsu" and the "kürsü" used in winter in both places with similar climate characteristics are the table usage, which is collected around the place and where the warm-up needs are met. The origins of these similar uses in the traditional Japanese house and the traditional Divriği house, located in different and distant geographies, can be traced back to Central Asia. In this study, the shape and use characteristics of "hori-gotatsu", a form of traditional Japanese house in the past, and the shape and use characteristics of the "kürsü" in the traditional Divriği house are compared.

1. Introduction

This study will be compared with that of Japan in "kotatsu" and Turkey's traditional Divriği house in a small settlement in Central Anatolia Region "kürsü" is similar to the user. Both allow the individual to warm up, not the space due to the harsh effect of the cold climate. These uses not only meet the need for heating, but are integrated with the use of tables with indoor furniture.

As Japan extends for about 3,000 km in the north-south direction, the country's climate varies from region to region; both terrestrial and tropical features are observed due to their spread over many degrees of latitude and the effect of surface forms, most of which are mountainous. (Keskin, 2012: 59) North; summer warm and short, winter long and very cold, in the middle quarters; summer hot and humid, winter short, in the southwest; while summer is hot, humid and long, winter is warm. (Hee-Soo: 570) In addition, because of the cold coming from Central Asia, the climate in Japan is cold and harsh in winter. (Büyük Larousse Sözlük ve Ansiklopedisi, "japon", vol: 12: 6054) The proximity to the oceans and the Asian mainland is one of the main factors that determine the climate. The characteristics of the surface shapes produce local climate differences. In the mountainous interior, the temperature drops considerably. (Ana Britannica, "Japonya", vol: 17: 211)

Divriği, located in the central part of Turkey, is a small settlement is dominated by continental climate. The effect of the cold climate was also important in shaping the traditional Divriği house. The continental climate of Divriği is similar to that of Japan's interior.

Although in different geographies, in similar climate, habits originating from Central Asia are seen as similar uses in two different geographies. The use of "kotatsu" in the traditional Japanese house, which has similar characteristics and origin in the habits of Central Asia, is similar to the use of the "kürsü" in the traditional Divriği house. The origin of these similarities can be attributed to the similarity of climatic and cultural characteristics.

"Kotatsu" in Japan and "kürsü" in Divriği, because the climate is going hard in winter, table usage also meets the need for heating. Both are traditional home interior furniture.

Since the action of sitting in both cultures is connected to the ground, "kotatsu" and "kürsü" are used for sitting on the ground by establishing a cross legged. For this reason, the main room of the house where the family is gathered in the traditional Japanese house is covered with the floor of the washitsu (https://en.wikipedia.org/wiki/Washitsu) and there is a low table made of wood in the middle of the room. In the traditional Turkish house, the actions depend on the ground. As in Asia, the Turkish house also required the use of carpet on the floor, where it was possible to establish a bond on the ground, kneel down, and also to have the bed act on the ground. It can walk comfortably on the soft carpet and rug laid on the pavement. Daily work is done on this cover. (Erdinç, 2009: 37) The act of eating also takes place on the ground. This habit was born of nomadic style and strengthened with the habit of eating comfortably. The habit of nomadic life is still in Anatolia. (Erdinç, 2009: 28)

As a necessity and habit of nomadic life, the most important feature of the rooms in the Turkish house is the multi-purpose use. You can sit in every room, work, eat, sleep, wash. The biggest factor that enables this is that moving equipment (furniture, furnishings) is moved. When necessary, the items are placed in the center of the room, after use, put back in place. For this purpose, the central area of the room was left empty. (Sayın, 2014: 25)

In Japanese home life, due to factors such as the small size of the country's surface area and the limited geographical boundaries such as being surrounded by water, the multi-purpose use of the place was necessary. This necessitated the use of minimal reinforcement for the actions taken in the space. (Nergiz, 2005: 104) In the traditional Japanese house, there is a multi-

purpose use of the room. However, the only furniture in the center of the room as a special case of the Japanese house, wooden table is the only furniture in the room. (Dodd & Richmond, 2001: 40) This table is especially "kotatsu" in winter. If necessary, it can be replaced with other uses for a period of time, it is eliminated and replaced with another.

Kotatsu and kürsü are close to the person of the heat source in order to warm up where the climate is harsh. It is integrated with the table, which is a functionally intensive use. Kotatsu and kürsü are two similar uses in different settlements, but which are similar in the form of cold climate. Japan's climate is one of the few places to live. (Büyük Larousse Sözlük ve Ansiklopedisi, cilt 12: 6056) The climate in Japan is cold and harsh in winter. Because of the northwestern winds coming from Asia, there is great cold in winter. (Hee-Soo: 570) (Büyük Larousse Sözlük ve Ansiklopedisi, cilt 12: 6054) Kotatsu is the center of life in Japan during the winter months. In the evenings, family members gather around kotatsu and keep the lower half of their bodies warm with kotatsu while eating, watching TV, playing games and enjoying commune. (http://en.wikipedia.org/wiki/Kotatsu) Even today, in many houses in winter, the Japanese prefer to sit in cushions around kotatsu. (Şenavcu, 2006: 10) Divriği is a settlement with cold terrestrial climate. The land in Divriği is partly mountainous. (http://www.divrigi.bel.tr/konum.aspx) Divriği is 1250 m above from the sea level. It is located on the slopes and at the bottom of the valley of the river, which merges with the Çaltı River, one of the branches of the Fırat River. (Tdv İslam Ansiklopedisi, cilt 9: 452)

In the traditional Divriği house, especially in winter, all the life in the house passes, meals are eaten, guests are welcomed, wedding, circumcision, funeral ceremonies such as the hall is called "toyhane". The place of this room is the "harem" section of the houses reserved for women and men because of their privacy. Toyhane is planned for the family to sit together in winter, to eat and to do handcrafts. (http://www.sivas.im/wp-content/uploads/Sivas.pdf)

The traditional house in Japan is a special place for Japanese people to hide. Contrary to the widespread practice in Anatolia, there are no home gatherings or home visits. The house is especially family-specific in Japan. (Erdemir, 1993: 11) (Keskin, 2012: 59)

In all societies, the family, which is the core of society, is important. The symbol of the family was the house, the symbol of the house was the "ocak". (Yünkül, 2005: 5) As an item or a building element in the place, the hearth emerged as a result of the effort of man to maintain fire and maintain its continuity. In order for man to continue his life, a special meaning has been imposed on the fire and the place where he was burned. (Eczacıbaşı Sanat Ansiklopedisi, cilt 3: 1360) In the traditional Turkish house, the hearths are constantly burning, and these hearths are used as the only unit responsible for heating. (Gerçek, 2010: 157) It is also used to warm the stove next to the cooking function and is positioned on a wall of the room. (Ateş, 2008: 22) The fireplace in the traditional Japanese house is called "irori". In the centre of the traditional Japanese house, irori's (Locher, 2013) (http://en.wikipedia.org/wiki/Kotatsu) main function was cooking and warming, which was burning continuously with coal fire. (http://en.wikipedia.org/wiki/Kotatsu) In time, the cooking function was separated from irori and the cooking function was completely in the kitchen. (Buckley, 2009: 267) (Locher, 2013)

The historical development of kotatsu began to form with the development and change of the traditional Japanese house due to the use of the traditional cooker "irori". (http://en.wikipedia.org/wiki/Kotatsu) The combination of the warm-up function of the traditional Japanese fireplace "irori" used for cooking and heating in the traditional Japanese house with the use of tables has turned into the use of a table that meets the need for the warm-up of today's "kotatsu". "Kotatsu", which is a traditional Japanese house, is an interior furniture where the table, which meets the warm-up function with the table, is combined with the heater. (Gill, 2004: 567) It is a low table made of wood, which is a source of heat built under the table, where the heat is provided from the bottom of the quilt covered on the table by laying a mattress or a heavy blanket. (McMillan, 1996: 3) The development of this table in the historical process has finally turned into a form of use known as "kotatsu". In the early stages of kotatsu; in cold weather, a wooden frame was placed on irori and the feet of those sitting around irori were heated by the temperature under this cover. (Locher, 2013)

In Japan and Divriği because of the climate is hard and cold to warm; heat source close to the individual solutions developed with the use of table. The use of "hori-gotatsu" in the development phase of "kotatsu" in the traditional Japanese house is also seen in the "kürsü" in the traditional Divriği house. These solutions are considered to be similar traditional solutions used in similar climates.

1.1. "HORİ-GOTATSU" IN THE TRADITIONAL JAPANESE HOUSE

The place of kotatsu is the centre of the traditional Japanese house, and with the development and change of Japanese type heaters over time, kotatsu's heat source has reached its present form by showing change and development. (Gill, 2004: 567) Kotatsu is a result of centuries of development, which has been transformed into a modern interior furniture, starting from the traditional fireplace, which provides cooking and warm-up function at the center of the traditional Japanese house called "irori" in the centre of the traditional house. Kotatsu's use of related heat source properties during this development process is called "hori-gotatsu".

The emergence of kotatsu begins in the fourteenth century (Muromachi period) by adding a seating platform to the "irori" (Figure 1) used for cooking and heating (Figure 2) in the cooking and seating functions. (Figure 3, 4) Hori; ditch, ko; fire, Tatsu; means hot feet. (http://en.wikipedia.org/wiki/Kotatsu)

Figure 1. Traditional fireplace: " irori", at the traditional Japanese house (Matsushika, 2004: 25)

Figure 2. Seating area shaped around the "irori" (Dündar, 2011: 21) (Parramore & Gong, 2012)

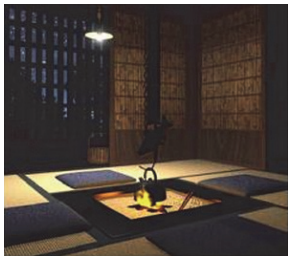


Figure 3. Cooking and seating functions in irori (Negoita, Howlett & Jain, 2004: 316)

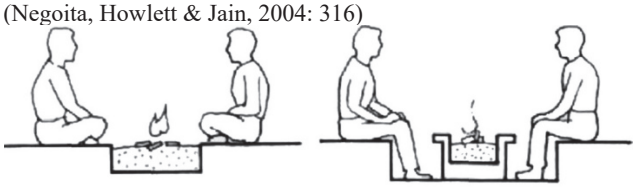


Figure 4. The transformation of the traditional Japanese fireplace "irori" into "hori-gotatsu", which is the early use of "kotatsu" (http://kyokaipartitions.tumblr.com/) (Nergiz, 2005: 104)

In its use, known as “hori-gotatsu”, it sits around the “irori”, which is about 40 cm deep from the ground, and it is heated by hanging the legs from the ground to the lower level furnace. (Gill, 2004: 567) (Locher, 2013) The heat source where coal is used as fuel is placed in the ground hole 40 cm below ground. The heat source is 40 cm below the ground surface and the occupants sit in the chair and heats their legs as if they were sitting. (Locher, 2013)

In hori-gotatsu legs from the floor is sitting down. (Figure 5) in later versions, the quilt above the wooden platform is removed from the coal fire with a trap called “oki”. (Gill, 2004: 567) (Figure 6)

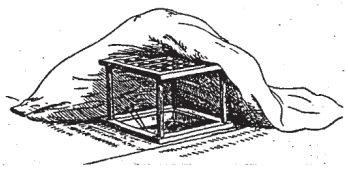


Figure 5. The heat source in “hori-gotatsu” is in the fire pit below ground level. (Erdemir, 1993: 54)

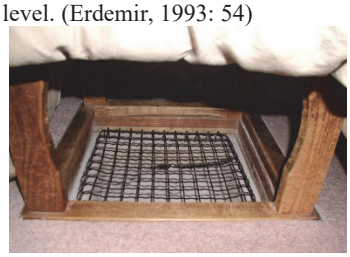


Figure 6. Hori-gotatsu is a “trap” on the heat pit to protect from fire. The temperature of the fire is protected by the ash placed on the trap. (http://www.daveahlman.net/Old_site/daveinjapan/arch/arch.htm)

“Hori-gotatsu” heats the legs of those around him, allowing people to sit around “irori” like in a chair and hang their legs. Thanks to the “trap” used in “hori-gotatsu” and the quilt covered on the table, people were able to use it by protecting from the dangers of fire. (Locher, 2013)

1.2. “KÜRSÜ” IN THE TRADITIONAL DİVRİĞİ HOUSE

It is the name of the special usage used in winter in the Toyhane, a special section peculiar to the traditional Divriği house. The head of the kürsü is the small section of “toyhane”, in square shape, with its center of the “kürsü”. (Divriği İnternet Gazetesi, 2012) “Toyhane” is a multi-purpose living room, especially in winter, where all life passes, meals are eaten, guests are welcomed, children and old people sleep in winter, weddings, circumcisions, funeral ceremonies, etc. Its place in the house is in the “harem” section, which is reserved for women and men. (Kültür, 2011: 39-47) (Öztürk, 2008: 15) Toyhane is planned for the family to sit together in winter, to eat and to do handcrafts. (Sivas Gezi Rehberi)

The toyhane consists of a rectangular or square-shaped “aşağı seki” at the entrance, a long rectangular “kilimüstü” at the entrance, and a “kürsü başı” (nimseki) at the entrance from “kilimüstü”. In the center of the square-shaped head section of the main seating area, there is a warm-up tool called a square-shaped “kürsü”. Approximately 25-35 cm depth of the ground around the head of the “kürsü” leaving a gap of 90 cm. "Fireplace" (Ateşlik) is placed in the middle of the pit in the form of a dish made of soil. Wooden desk with a height of 60-70 cm is placed on it. On the “chair desk”, two quilts are covered, one big and the other small. Quilt; prevents heat from spreading around and ensures that the of “kürsü başı” stays warm all the time. (Sivas Gezi Rehberi)

“Kürsü başı”; in the main place and in the form of square. (Figure 7) The central heating unit in the middle of the place is called the “kürsü”. Family members gather around the kürsü and eat, talk and commune. Ten people can sit around the “kürsü”. “Kürsü başı”, rugs, pillows and cushions called nesting has been teffled with cushions. Cabinets in “kilimüstü” have been fabricated. In the center of the “kürsü başı” there is a “fire” at the ground 25-35 cm below. The fire is fired from the “fireplace” placed in the "kilimüstü". 60-70 cm wooden "kürsü’s table" is placed on the fire. (Figure 8) Wood is used as fuel. (Kültür, 2011: 44)

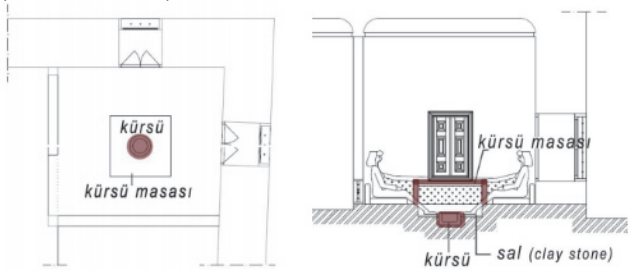


Figure 7. In the plan and section of “toyhane”, “kürsü” and “kürsü başı” (Kültür, 2011: 44)

a) b) c)

Figure 8. a. In the traditional Divriği house, the place of the “kürsü” in the “toyhane” and the “fireplace”, **b.- c.** “kürsü başı” in Hacı Nafisli House (Kültür, 2011: 45)

In the traditional Divriği house until the 1850s, “kürsü başı” (nimseki) can be seen “toyhane” until the second quarter of the twentieth century. (Kültür, 2011: 44) “Toyhane” and “kürsü başı” tradition were used in Divriği until the second quarter of the twentieth century. (http://www.divrigi.bel.tr/evler.aspx) (Kültür, 2011: 39-47) The kürsü was used until the 1960s. (Kültür, 2011: 44)

Until the 1920s, the traditional Divriği house had the traditional needs and infrastructure to meet them. As the social structure changed over time, the traditional house changed rapidly in the 1950s. New Needs appeared in the organization of the house and disappeared from the “toyhane” space organization. “Toyhane”, the largest place in the house, is divided into the rooms required by new modern needs such as the living room, bedroom. The relationship with toyhane has also changed as the

large family living in large houses became divided into the core family. When the "toyhane" disappeared, the "kürsü" disappeared. Stove and central system in homes began to be used. For this reason, it was brought to the same level as "fireplace" (Ateşlik) flooring, which is the heat pit under the "kürsü başı" and "kürsü". (Kültür, 2011: 11)

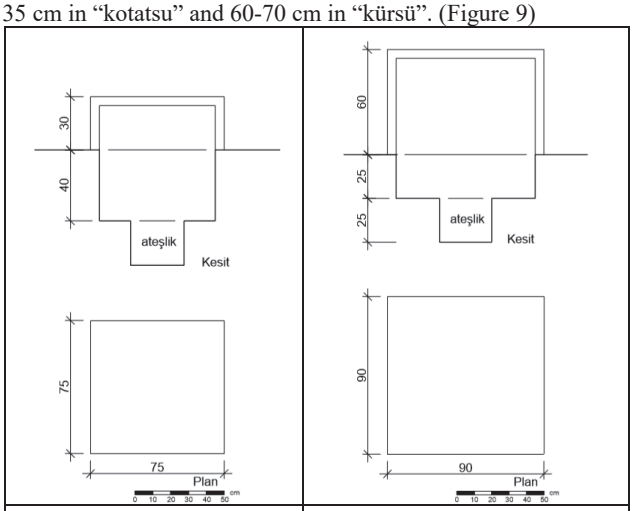
1.3. COMPARISON BETWEEN "HORİ-GOTATSU" AND "KÜRSÜ"

Kotatsu and kürsü are located in the common living area of traditional Japan and Divriği houses. Its a place to live in a traditional Japanese house. However, under the influence of the privacy brought by Islam in Anatolia, the place of the "kürsü" is in the "harem" section reserved for the use of men in the traditional Divriği house.

The living room, covered with tatami wicker floor in Japanese house, is the meeting place of the family members. Family spends most of their time here. In the middle of this room there is a large blanket under the "kotatsu" and a heater and cushions around it. (Şenavcu, 2006: 10) In the Anatolian Turkish house, the overlays that walk over the room are mostly carpets, rugs and wicker textiles. From time to time felt was used. Whatever the structure of the underlying tile is bare. One of the important factors in the formation of this kind of lower cover of the room is that the Turks sat on their knees and prayed on the ground. (Yünkül, 2005: 10) In Japanese society, the residence is located by establishing a cross legged. (Locher, 2013) (Güvenç, 2010: 50)

"Kotatsu" and "kürsü" table is in square shape, under the table for the heat source "fireplace" (Ateşlik) is called a heat pit. The level difference between the floor surface of the pit where the feet are hanging at hori-gotatsu is 25-35 cm (Sivas Gezi Rehberi) and the level difference between the floor surface of the heat pit and the floor surface of the heat pit at hori-gotatsu is 40 cm. (http://en.wikipedia.org/wiki/Kotatsu)

Kotatsu and the kürsü are examined in terms of form and technical features; plan dimensions of hori-gotatsu; approximately 75 x 75 cm, edge of the kürsü table approximately 90 x 90 cm, four-legged, made of wood is a square shaped table. Considering that this table has become part of musical social activities in Divriği; it is understood that it can grow according to the number of people. The table heights from the ground are 30-35 cm in "kotatsu" and 60-70 cm in "kürsü". (Figure 9)



"hori-gotatsu" in Japan | "kürsü" in Divriği

Figure 9. Comparison of "hori-gotatsu" and "kürsü" (drawing: Ilknur Yüksel Schwamborn)

Coal is used as a fuel for "hori-gotatsu" and wood is used as a fuel for "kürsü".

Kotatsu has been developed and changed for hundreds of years according to the technical and technological possibilities of time and the needs of the day. In this way, it has been developed and used for hundreds of years. "Hori-gotatsu", one of the earliest uses of this development process, is similar to the "kürsü" in the traditional Divriği house in Anatolia. However, the kürsü used in the traditional Divriği house began to change the traditional use of the traditional house with the social change process which began to be seen in the 1950s. In the plan of the traditional house, "toyhane" until the second quarter of the twentieth century and the use of a kürsü until the 1960s can be seen. Today, these uses in the traditional Divriği house are now abandoned. As a result, Divriği is located in a place where it is not attacked, traditional features can be preserved for many years. (Balgalmış: 452) However, after the 1960s when Westernization began to be seen, traditional items began to be abandoned.

2. Conclusion

"Kotatsu" is the general name of the low table in the traditional Japanese house. The use of a heated table in the traditional Japanese house known as kotatsu in the Muromachi period (1338-1573) (Ana Britannica, cilt 10: 253) is similar to the use of "hori-gotatsu" and the use of a "kürsü" in traditional Divriği House.

In the traditional Japanese house "hori-gotatsu" and in the traditional Divriği house, "kürsü" are a low table made of wood that is sitting around in the place where it meets the warm-up needs of people in winter. In the traditional Divriği house "kürsü" and in the traditional Japanese house "kotatsu" are common living spaces, which are the centre of the traditional house. Both have been the center of life in winter in the traditional house.

While the use of "kotatsu" in Japan was more private for the use of family members, the use of the "kürsü" in Divriği was used among family members, but was also part of social meetings by the guests. For this reason, the place of the "kürsü" has been the "harem" section special for the use of women in the traditional house. (Öztürk, 2008: 15)

Plan dimensions of hori-gotatsu, approximately 75 x 75 cm, edge of the kürsü table 90 x 90 cm, four-legged, made of wood is a square shaped table. Elevations from the ground; 30-35 cm of the kotatsu, 60-70 cm of the kürsü. The reason that the dimensions of kotatsu and kürsü are different from each other is because they are shaped according to the ergonomic characteristics of Japanese and Turkish people.

Coal was used in kotatsu and wood was used in kürsü.

Hori-gotatsu is a usage that corresponds to the in the fourteenth century (Muromachi period) in this development line of kotatsu depending on the developments related to the heat source during the time period of kotatsu usage. Innovation continues today and thanks to improvements kotatsu develops and continues to be used in Japanese society. Kotatsu has turned into an electric heater installed under the table today. The use of the kürsü in the traditional Divriği house is abandoned today.

The origin of the similarity "kürsü" of the traditional Divriği house with the "kotatsu" in the traditional Japanese house is traced back to Central Asia.

As a result, in the past, similar use in two different societies with similar climate and cultural characteristics has been affected differently direction in the face of Westernization.

The tendency to abandon traditional uses under the influence of Westernization in the traditional Turkish house is also observed in the use of "kürsü". Japan has also been affected to some extent by Westernization. In Japanese society, however, traditional uses have not been abandoned altogether, the techniques and ideas taken have been used to improve and

develop traditional uses, which are the rooted products of culture. In Japan, they did not give up the traditional uses by showing a different direction from the tendencies in Anatolia and continued to develop and use them with the technical and technological possibilities of the time. In Japan “kotatsu; was developed in parallel with technical and technological changes in the historical process. The process of change and development of Kotatsu continues today with patent applications based on the development of “kotatsu”.

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Intercultural Understanding, 2019, volume 9, pages 27-29

ACTIVITY REPORTS OF THE INSTITUTE OF TURKISH CULTURE STUDIES

Inter Cultural Studies of Architecture (ICSA) in Japan 2018

In accordance with the general exchange agreement between Mukogawa Women's University (MWU) and Bahçeşehir University (BAU), students and professors from BAU's Faculty of Architecture and Design joined us at Koshien Hall and the Architecture Studio on MWU's Kami-Koshien Campus from July 10 to August 3, 2018.

BAU students tackled second-, third- and fourth-year MWU student design projects. By participating in this program, they gained knowledge, learned techniques, and increased their awareness of architectural design. They also joined basic design studios of first-year MWU students and had the opportunity to experience traditional Japanese woodwork (with Sadahide Kanda, a master carpenter in Hyogo).

Participants
Professors: Associate Professor Murat Dündar, Assistant Professor Belinda Torus
Students: Elif Berna Yılmaz, Halime Zelal Ertürk, Merin Beste İdil, Merve Atar, Mina Çevik, Sena Metalar, Simge Özcan, Şeyma Çimen, Yaprak Karataş, Yeşim Gül Ülker


Courtesy call on Chancellor Ryo Okawara and President Kazuyoshi Seguchi of MWU on July 11.


Chorus performance by MWU students in the welcome party on July 12.


Welcome message by Prof. Shigeyuki Okazaki (Chair, Department of Architecture, MWU)


Each BAU student gave a self-introduction in Japanese.

MWU students gave welcome speeches in English and Turkish.

Courtesy call on Nishinomiya Mayor Toshiro Ishii

BAU students learned how to draw a perspective view.

Architectural Design Studio I: Design of small-scale Architectural space through combination of planes

The students visited Hanshin Naruo Station for studying design of station.

Architectural Design Studio III: Rebuilding Hanshin Koshien Station with a membrane-structured roof

BAU students tackled design projects with MWU students.

Architectural Design Studio V: Paradise along waterfront

Master Carpenter Sadahide Kanda instructed the BAU students in planing.

Tea ceremony held by MWU students on July 19

BAU and MWU students wore yukatas for tea ceremony.

Prof. Okazaki conferred the certificate of completion and sketch drawn by him on each BAU student in the farewell party on July 27.

Each BAU Student stated her impression of life in MWU.

The commemorative photograph

After the farewell party, BAU students treated MWU students to Turkish cuisine.

BAU and MWU students chatted pleasantly.

Intercultural Understanding, 2019, volume 9, pages 30-38

Inter Cultural Studies of Architecture (ICSA) in Rome 2019

A general exchange agreement between Mukogawa Women's University (MWU) and Bahçeşehir University (BAU) was signed on December 8, 2008. According to this agreement, 11 Japanese second-year master's degree students majoring in architecture visited Italy from February 19, 2019, to March 2, 2019.

The purpose of "Intercultural Studies of Architecture (ICSA) in Rome" program is to gain a deeper understanding of western architecture and art. Italy is a country well known for its extensive cultural heritage and architecture. Many of the western world's construction techniques are based, on Italy's heritage and architecture. Therefore, Italy was selected as the most appropriate destination for this program. Based on Italy's historic background, the students were able to investigate the structure, construction methods, spatial composition, architectural style, artistic desires based on social conditions, and design intentions of architects and artists for various buildings. This year's program focused on "ancient Roman architecture and sculpture," "early Christian architecture," "Renaissance architecture, sculpture, and garden," and "Baroque architecture and sculpture. "

Before the ICSA trip to Rome, the students attended seminars on studying historic places during their visit abroad and were asked to make a presentation about the stuff that they learned during these seminars. During their trip to Rome, the students had the opportunity to deepen their understanding of architecture and art, measure the height and span of architecture, and draw sketches and make presentations related to some sites that they have visited. A report describing the details of this program is given below.

Participants

Professors: Shigeyuki Okazaki, Yuuka Nakamura
Students: Moeko Ikezawa, Yo Uehara, ChisatoEguchi, Kokoro Ohara, Yufuko Okuno, Kimi Kamimoto, Ayano Shirohara, Mizuki Nagata, Miru Hirata, Hitomi Yutani

Schedule

February 19	Departure from Kansai International Airport for Rome Arrival at Rome, Leonardo da Vinci Fiumicino Airport via Amsterdam Airport Schiphol
February 20	Ancient Roman architecture tour
February 21	Renaissance architecture and Baroque architecture tour in Rome
February 22	Vatican tour
February 23	Renaissance architecture and garden tour in Rome
February 24	Ancient Roman architecture tour and Baroque architecture tour and visit to Borghese Gallery in Rome
February 25	Assisi and Siena tour
February 26	Renaissance architecture and garden tour in Florence
February 27	Continuation of Florence tour
February 28	Renaissance garden tour in Bagnaia
March 1	Departure from Leonardo da Vinci Fiumicino Airport for Japan
March 2	Arrival at Kansai International Airport via Amsterdam Airport Schiphol

February 19

We departed from Kansai International Airport early in the morning and arrived at Leonardo da Vinci Fiumicino Airport in Rome via Amsterdam Airport Schiphol. We met Dr. Murat Dündar (Vice Dean of the Faculty of Architecture and Design, BAU) and Ms. Betül Ünal (Assistant, BAU) at the arrival gate of Leonardo da Vinci Fiumicino Airport.

At Kansai International Airport, The exchange program students are distributing their report on visiting historic places.

At Fiumicino Airport, Dr. Dündar and Ms. Ünal with the exchange program students.

February 20

We visited ancient Roman architecture sites located at the center of Rome, as well as some Baroque architecture sites. The students had the opportunity to experience the great ancient Roman architecture, including the Colosseum and Pantheon. We also visited Chiesa del Gesù, which is considered the first Baroque façade, Piazza Navona designed by Bernini, Sant'Agnese in Agone designed by Borromini, and Santa Maria della Pace. Piazza Navona is a famous site known for the works of Bernini and Borromini, who were the great masters of the Baroque period. The students made presentations about each place they visited. Overall, on day 1, we appreciated the greatness of the Roman architecture and the amazing architectural technique of Baroque.

Piazza Navona

Colosseum

February 21

We attended a guided tour to learn about Renaissance and Baroque architecture. First, we visited Piazza del Popolo and the sites around it. At Santa Maria del Popolo, a student gave a presentation about the plaza, Santa Maria dei Miracoli, and Santa Maria in Montesanto. These three chapels face

Santa Maria dei Popolo. Santa Maria dei Miracoli and Santa Maria in Montesanto are called "a twin church." During the visit, the students had the opportunity to sketch Santa Maria dei Miracoli.

After lunch, we visited San Pietro in Montorio Tempietto designed by Donato Bramante in the 16th century. Tempietto is known to be one of the greatest works of the High Renaissance architecture. Tempietto became a template for later cupolas. In the evening, we visited Santa Maria della Vittoria. This Roman Catholic church is known for its famous sculpture, namely, the Ecstasy of Saint Teresa, completed by Bernini. We had an opportunity to see the wonderful combination of the architecture and its sculptures. At our last stop of the day, we visited Santa Maria degli Angeli. This chapel was a Roman bath built in the Renaissance period originally. Michelangelo redesigned the chapel and informed it into a church.


Piazza del Popolo


Santa Maria degli Angeli


San Pietro in Montorio Tempietto

February 22

We spent our day touring around Vatican City. The first stop was at the Vatican Museum, one of the most famous and important museums in the world. At the museum, the students appreciated the display of sculptures (e.g., Gruppo del Laocoonte in Museo Pio-Clementino), which originate from the ancient Egyptian, Greece and Roman period. We also had the opportunity to visit the Last Judgment in Sistine Chapel and Scuola di Atene in Stanze (the School of Athens) by Raphael, along with other sites. After having a light lunch at the museum's cafeteria, we climbed about 300 steps of stairs to enter the dome at the top of the Basilica di San Pietro. We had the opportunity to have a closer look at the cupola completed by Michelangelo. We toured inside the basilica and felt the greatness of the space. We also saw the Pietà sculptured by Michelangelo (one of the most famous sculptures) and the altar with Bernini's canopy. After leaving the basilica, we visited Piazza San Pietro, which is located directly in front of the basilica. This elliptic plaza (with a width of 240m) was designed by Bernini.


Vatican Museum


Piazza San Pietro

February 23

We visited two Baroque architectures, namely, Saint Andrew's at the Quirinal and San Carlo alle Quattro Fontane. Saint Andrew's at the Quirinal was designed by Bernini, and San Carlo alle Quattro Fontane was designed by Borromini. These two churches were built along the same street. Both exhibit an impressive façade. Afterwards, the students spent some time sketching the interiors of both churches and then tried to understand the features of the Baroque architecture. Later in the day, we moved to Castel Gandolfo, where we had the opportunity to visit the amazing huge garden, namely, Villa Pontificia. Castel Gandolfo is located at the bank of Lake Albano, approximately 23km to the southeast of Rome. Villa Pontificia was built to serve as the summer imperial villa of the Pope. We also enjoyed a great view of the Rome plain.

At our last stop, we visited Viale Appio Claudio, an ancient Roman aqueduct. There, we learned about the water supply in the ancient Roman age and the structure of the aqueduct.


San Carlo alle Quattro Fontane


Saint Andrew's at the Quirinal


Viale Appio Claudio

Castel Gandolfo


Villa Pontificia

February 24

We toured around several sites to learn about the Renaissance and Baroque architecture. First, we visited the Campidoglio designed by Michelangelo. Later, we stopped at Chiesa di Sant'Ivo alla Sapienza designed by Borromini to admire his great masterpiece. Afterwards, the students sketched both the interior and the exterior of Chiesa di Sant'Ivo alla Sapienza. Then, we moved to the cafeteria nearby, where we had a light meal. After lunch, we visited Borghese Gallery to learn about the Baroque sculpture completed by Bernini. There, we had the opportunity to admire some famous sculptures, such as Apollo and Daphne, the Rape of Proserpina, and David. Next, we stopped at Porta Pia, whose façade was designed by Michelangelo. Afterwards, we went to San Paolo fuori le Mura, one of the four papal basilicas of Rome. At the basilica, we learned about the spatial composition of the early Christian architecture. Finally, we moved to Trajan's Markets, an ancient Roman building complex consisting of offices, stores, and houses, among others. This building complex was constructed using Roman concrete in the 2nd century AD. There, we were able to see the construction of ancient arches in the Roman era. February 24 was the last day of our tour in Rome.


Chiesa di Sant'Ivo alla Sapienza


San Paolo fuori le Mura

February 25

We traveled to the north of Rome on a tour to Assisi and Siena. The Basilica of San Francesco of Assisi has been a UNESCO World Heritage Site since 2000. This basilica is the mother church of the Roman Catholic Order of Friars Minor Conventual. It is also one of the most important places of Christian pilgrimages in Italy. The upper church of the basilica exhibits a Gothic architecture, whereas the lower church follows the Romanesque architecture. After having lunch at Assisi, we moved to Siena. Siena was listed as a World Heritage Site in the year 1995. We enjoyed the middle-ages cityscape of Siena and we visited Duomo di Siena and Piazza del Campo. It is said that Duomo di Siena has the most beautiful Gothic façade in Italy. After visiting Siena, we departed to Florence.


Basilica of San Francesco, Assisi


Middle-ages cityscape of Assisi


Piazza del Campo, Siena


Middle-ages cityscape lit up by the setting sun, Siena

February 26

We continued our trip to Italy with a three-day visit to Florence, the city where Renaissance art and architecture bloomed. On day 1, we visited some Renaissance gardens located in a suburb of Florence, namely, Villa Medici a Fiesole and Villa Gamberaia. We experienced the wonderful combination of architecture, gardens and cityscape. We also had the opportunity to view the great landscape from the garden built on a high elevation. After visiting the two beautiful villas, we went back to the Florence city center and had lunch.

In the afternoon, we visited Galleria dell'Accademia and saw David by Michelangelo, one of the most famous statues and most outstanding works during the Renaissance period. We also saw other works of Michelangelo, such as the four slave sculptures. After leaving Galleria dell'Accademia, we visited Palazzo Medici Riccardi, which exhibits a characteristic façade of Florentine architecture in the Renaissance period. Finally, we visited Santa Maria Novella, which is well-known for its oldest

drugstore in the world, with a façade designed by Alberti. The students observed the façade carefully and sketched it.


Villa Medici a Fiesole


Villa Gamberaia


Basilica di Santa Maria Novella

February 27

On the second day of our tour in Florence, we started with a visit to Santa Maria del Fiore. This is the landmark of the city of Florence because of its giant cupola, which was designed by Brunelleschi. Brunelleschi is the first known architect of the Renaissance style.

Afterwards, we went to San Lorenzo, and visited the basilica, a mortuary chapel for the Medici family, Sagrestia Vecchia (Old Sacristy) designed by Brunelleschi, and Sagrestia Nuova (New Sacristy), which was based on Michelangelo's design. New Sacristy is known as the first example of structure that was designed and decorated by one artist only. The students sketched the place of New Sacristy. After sketching, we moved to San Lorenzo's courtyard.

Next, we made a short visit to the Baptistery of Saint John, whose ceiling is decorated with golden mosaics and floor is also decorated with mosaics of various colors. From openings of the floor, we were able to see and confirm the remains of the original Roman Empire floor.

In the afternoon, we visited the Basilica of Santa Croce, which is one of the most important buildings of Gothic architecture in Italy. We also moved inside Cappella dei Pazzi and Michelangelo's tomb, which are two other sites in Santa Croce. Cappella dei Pazzi was designed by Brunelleschi in 1430. We were also able to see his masterpiece again, and admired his contribution to the Renaissance architecture in Florence.


New Sacristy in the Basilica of San Lorenzo

Santa Maria del Fiore


Santa Croce

February 28

This was the last day of our trip program. We spent our day on a Bagnaia tour and visited the amazing garden built in the 16th century in Villa Lante. Villa Lante has one of the most famous and well-preserved Renaissance gardens in Italy. The design of the garden is geometrical and the garden includes some beautiful fountain and springs. We admired the harmony of nature and artifacts. The students sketched them.

After visiting Villa Lante, we left Bagnaia and returned to Rome, where we had dinner. We thanked Dr. Dündar and Ms. Ünal for organizing of the ICSA trip program and said goodbye to them at the hotel.


Villa Lante


Villa Lante: Fontana dei Giganti

March 1-2

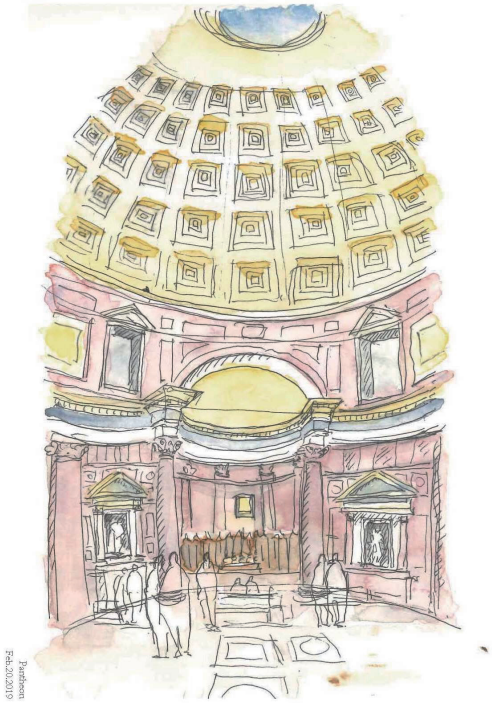
On March 1, our guide of Rome, we went to Leonardo da Vinci Fiumicino Airport accompanied by Ms. Francesca (a tour guide in Rome). The students thanked her for her splendid commentary on the historic architecture of Italy.

After flying for 13 hours (with an intermediate stop at Amsterdam Airport Schiphol), all members arrived at Kansai International Airport in the morning of March 2, 2019. The ICSA program in Rome became a precious cultural experience for the students. This experience will certainly be useful in their future careers.

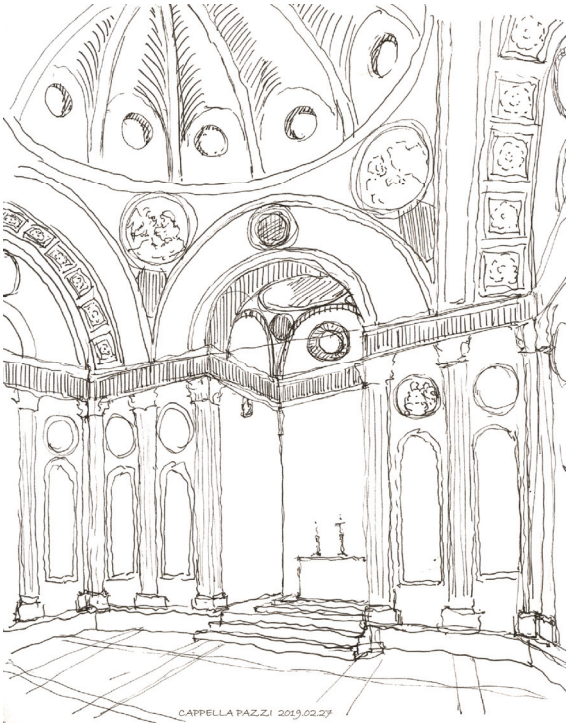
Photo with a tour guide in Rome, Fiumicino Airport

Kansai International Airport

Students' Sketches



Pantheon, drawn by Ayano Shirohara



Cappella de Pazzi, drawn by Kokoro Ohara

Intercultural Understanding, 2019, volume 9, pages 39-55

Restoration and Conservation of Traditional Timber Structures in Japan: Japanese Sophisticated Traditional Timber Structure Designs and Five Methods for Restoration and Conservation of Japanese Traditional Timber Structures*

Shigeyuki Okazaki / Professor, Mukogawa Women's University, Japan

* Reprinted from "Okazaki, S. (2019). Restoration and Conservation of Traditional Timber Structures in Japan: Japanese Sophisticated Traditional Timber Structure Designs and Five Methods for Restoration and Conservation of Japanese Traditional Timber Structures. In D. Sürücü (Ed.), *Proceedings of Symposium on Restoration and Conservation of Traditional Timber Structures 6: Special session: Contemporary Timber Structures 24-25 April 2018* (pp. 51-73). Istanbul, Turkey: Istanbul Metropolitan Municipality. Department of Cultural Assets Conservation, Directorate for the Conservation, Implementation, and Supervision of Cultural Assets (KUDEB)."

Introduction

The characteristic of the traditional wooden building construction in Japan is that the prefabricated parts are produced at the carpenter's workshop and assembled at the construction site. A joint system has been developed to facilitate assembly. Therefore, it is easy to exchange and disassemble the parts after construction. It is also possible to reuse the parts after disassembling. Furthermore, in the townhouse called *machiya* in Kyoto, which was the capital of Japan, the standardization of parts has been carried out, not only reuse of structural members but also reuse of fittings and floor *tatami* mats were done. An example of intentionally showing the beautiful structural design of the assembled frame without ceiling will be introduced. The average annual rainfall in Japan is 1500 mm. To protect the buildings especially walls from the heavy rain, not only a sloping roof, but also long eaves have been set up on each floor. In order to support wide eave, a member called *hanegi* has been used. These wide eaves make deep shadow underneath and this is another characteristic of Japanese traditional architecture. These are explained by the following five items.

1. Japanese Sophisticated Traditional Timber Structure Designs
2. Restoration and Conservation of Japanese Traditional Timber Structures of Townhouse in Kyoto
3. A Japanese Traditional Teahouse and Traditional Wood Joinery System
4. The Sequence of the Disassembly Work of the Pagoda in Daigo-ji Temple
5. Wide Eaves and Spatial Organization Created by Eaves on Each Floor as a Characteristic of Traditional Japanese Architecture & The Long Log Called Hanegi Supports the Wide Eaves of Japanese Traditional Timber Structure

1. Japanese Sophisticated Traditional Timber Structure Designs

Hierarchy of the traditional timber structure is visible and designed in a harmony with its components. Jōdo-ji Temple and South Gate of Todai-ji Temple were both constructed by monk Chōgen (1121-1206) and craftsmen he invited from Song Dynasty (960-1279). A technique called *nuki* (penetrating tie beams passing through the drilled columns) has been used. All structural materials and and eaves are exposed in the temples which do not have ceiling surface. That is a typical example of expressing the esthetics of structure and architecture.

1.1. Jōdo-ji Jōdo-dō Temple

Jōdo-ji Jōdo-dō Temple (founded in 1197) stands on a land facing a plain in the west. When the sunset from the west illuminates the three statues of Amitābha (Buddha) from the back, interior of the temple changes into a world of red and gold Western Pure Land. (Amitābha's Buddhist paradise) It is a view that Amitābha will ride on the cloud and welcome the spirits of dead. Drawings are cited from Reference 1: (Kokuhō Jōdoji Jōdo-dō Shūri Kōji Hōkoku-sho: 国宝 浄土寺浄土堂修理工事報告書（図版編) [National Treasure of Japan: Five-story Pagoda of Jyodo-ji Temple Repair Construction Work Report (Illustration)]. Hyogo: Gokurakusan Jyodo-ji Publisher 極楽山浄土寺, 1993. Print.）

Figure 1: Eastern elevation.

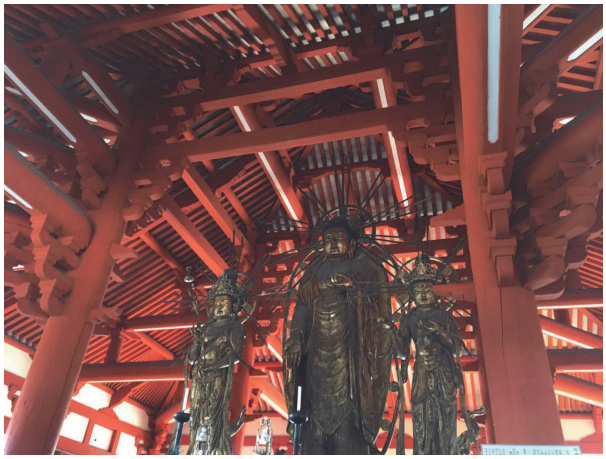


Figure 2: Inside view, Amitābha (Buddha) statue seen from the east side.

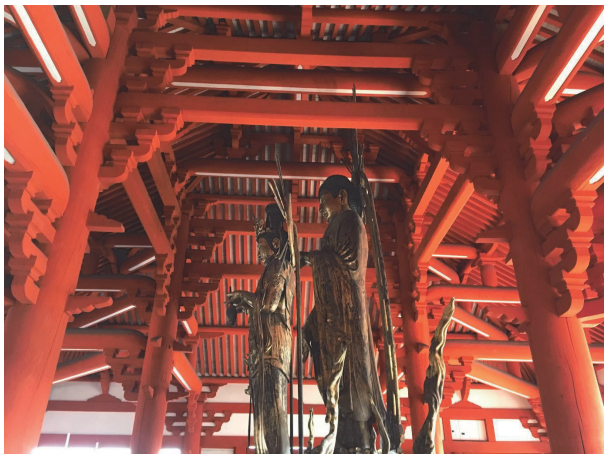


Figure 3: Inside view, Amitābha (Buddha) statue seen from the north side.

Figure 4: There is no ceiling surface, all the structural members are visible. Composition of three beams and extensive use of tie beams.

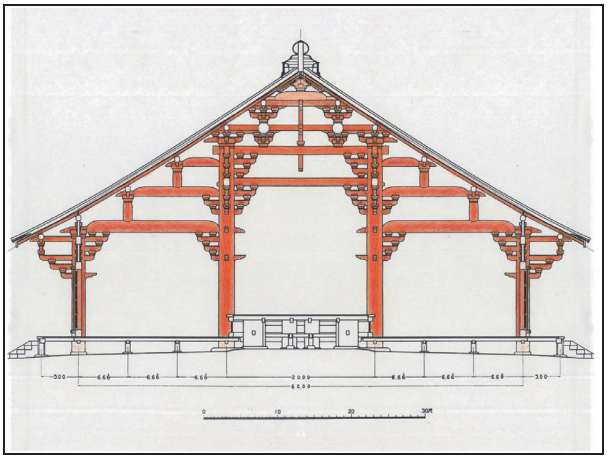


Figure 5: Sectional view Reference 1: (Kokuhō Jōdoji Jōdo-dō Shūri Kōji Hōkoku-sho: 国宝 浄土寺浄土堂修理工事報告書（図版編）[National Treasure of Japan: Five-story Pagoda of Jyodo-ji Temple Repair Construction Work Report (Illustration)]. Hyogo: Gokurakusan Jyodo-ji Publisher 極楽山浄土寺, 1993. Print.）

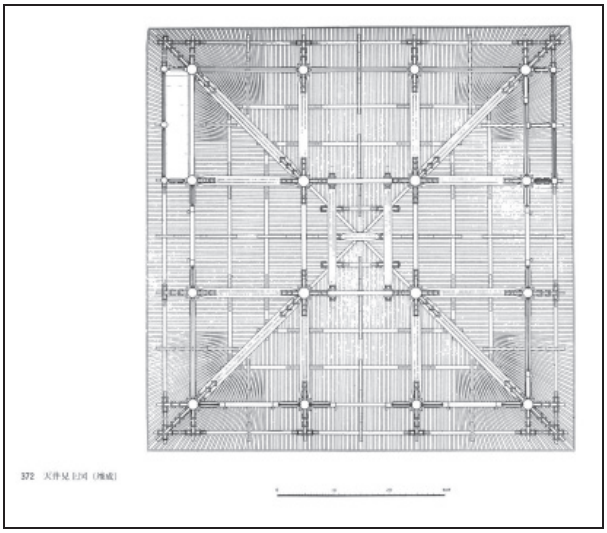


Figure 6: Ceiling plan Reference 1: (Kokuhō Jōdoji Jōdo-dō Shūri Kōji Hōkoku-sho: 国宝 浄土寺浄土堂修理工事報告書（図版編）[National Treasure of Japan: Five-story Pagoda of Jyodo-ji Temple Repair Construction Work Report (Illustration)]. Hyogo: Gokurakusan Jyodo-ji Publisher 極楽山浄土寺, 1993. Print.）

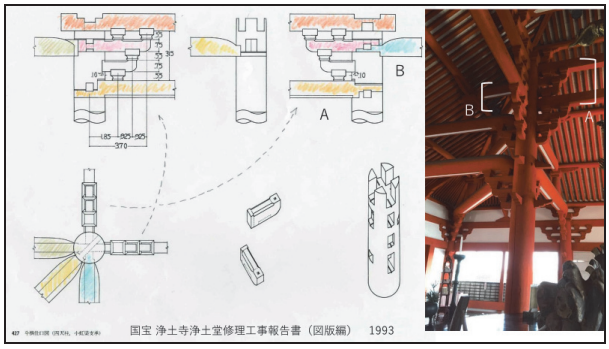


Figure 7: Detail showing the relation of wooden pillar and tie beam Reference 1: (Kokuhō Jōdoji Jōdo-dō Shūri Kōji Hōkoku-sho: 国宝 浄土寺浄土堂修理工事報告書（図版編）[National Treasure of Japan: Five-story Pagoda of Jyodo-ji Temple Repair Construction Work Report (Illustration)]. Hyogo: Gokurakusan Jyodo-ji Publisher 極楽山浄土寺, 1993. Print.）

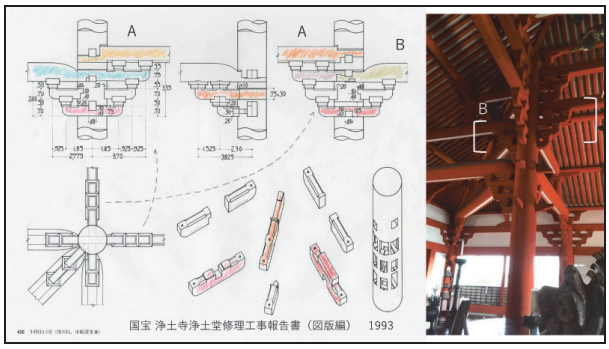


Figure 8: Detail showing the relation of wooden pillar and tie beam 2 Reference 1: (Kokuhō Jōdoji Jōdo-dō Shūri Kōji Hōkoku-sho: 国宝 浄土寺浄土堂修理工事報告書（図版編）[National Treasure of Japan: Five-story Pagoda of Jyodo-ji Temple Repair Construction Work Report (Illustration)]. Hyogo: Gokurakusan Jyodo-ji Publisher 極楽山浄土寺, 1993. Print.）

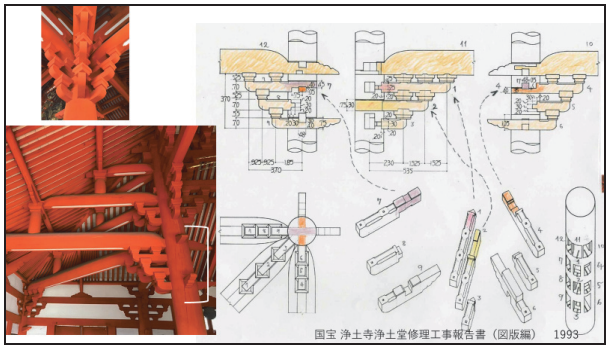


Figure 9: Detail showing the relation of wooden pillar and tie beam 3 Reference 1: (Kokuhō Jōdoji Jōdo-dō Shūri Kōji Hōkoku-sho: 国宝 浄土寺浄土堂修理工事報告書（図版編）[National Treasure of Japan: Five-story Pagoda of Jyodo-ji Temple Repair Construction Work Report (Illustration)]. Hyogo: Gokurakusan Jyodo-ji Publisher 極楽山浄土寺, 1993. Print.）

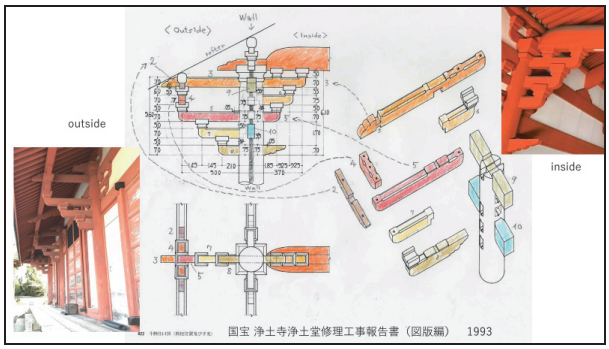


Figure 10: Inside and outside of timber structure Reference 1: (Kokuhō Jōdoji Jōdo-dō Shūri Kōji Hōkoku-sho: 国宝 浄土寺浄土堂修理工事報告書（図版編）[National Treasure of Japan: Five-story Pagoda of Jyodo-ji Temple Repair Construction Work Report (Illustration)]. Hyogo: Gokurakusan Jyodo-ji Publisher 極楽山浄土寺, 1993. Print.）

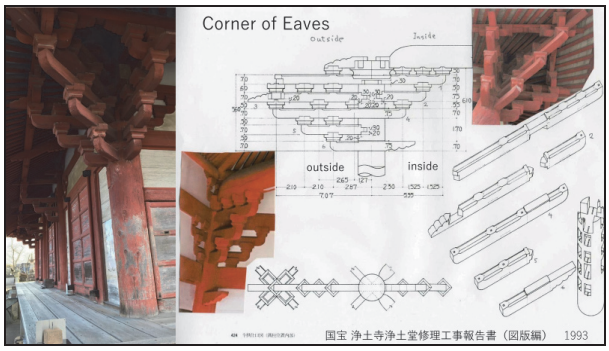


Figure 11: Corner of eaves and inside of temple Reference 1: (Kokuhō Jōdoji Jōdo-dō Shūri Kōji Hōkoku-sho: 国宝 浄土寺浄土堂修理工事報告書（図版編）[National Treasure of Japan: Five-story Pagoda of Jyodo-ji Temple Repair Construction Work Report (Illustration)]. Hyogo: Gokurakusan Jyodo-ji Publisher 極楽山浄土寺, 1993. Print.）

Figure 12: Japanese traditional structure system: Un-anchored pillar under the floor.

1.2. Great South Gate of Tōdaiji Temple

Great South Gate of Tōdaiji Temple was rebuilt by monk Chōgen like Jōdo-ji Jōdodō Temple in 1203. All the structural materials are exposed with a structure in which penetrating tie beams passing through 18 gigantic columns with a height of 21 m. A restoration work were carried out in 1930 and steel reinforcement was made. We also made a proposal of adding reinforcement with wooden components of the same system. The gate was designated as National Treasures of Japan. The following drawings are quoted from Reference 2: (Fujii, Keisuke 藤井恵介 & Suzuki, Kakichi 鈴木嘉吉 & Tōdaiji Temple South Gate Repair Construction Office 東大寺南大門修理工事事務所. Shūri Hōkoku-sho Tōdaiji Nandaimon-shi Oyobi Shōwa Shūri Yōroku: 修理報告書 東大寺南大門史及昭和修理要録 [Repair Report: Tōdaiji Temple Great South Gate History and Showa Period Summary]. Tokyo: Bunsei Shoin Co. Ltd. 文生書院, 2005. Print.) with the addition of the author.

Figure 13: Great South Gate of Tōdaiji Temple.

Figure 14: All Frames are exposed.

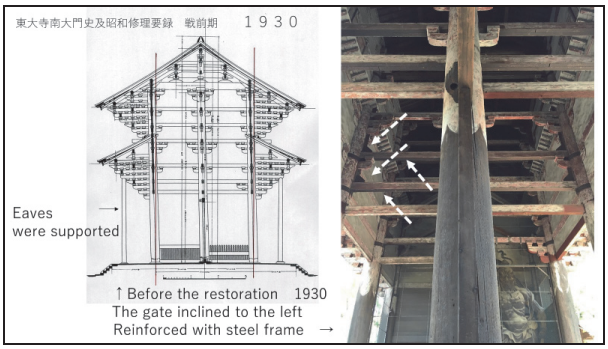


Figure 15: Before the restoration in 1930, the gate had inclined to the left and eaves had been supported. Eaves were reinforced with steel frames.

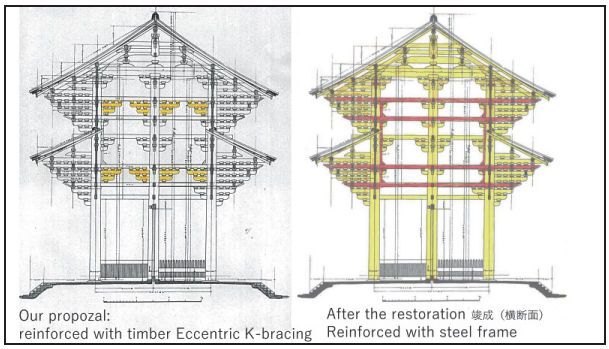


Figure 16: Our proposal (reinforced with timber Eccentric K-bracing) and restoration reinforced with steel frames in 1930.

2. Restoration and Conservation of Traditional Timber Townhouses in Kyoto

Kyoto was the capital of Japan from late 8th century until the latter half of the 19th century. Surrounded by the mountains in the north, east and west, the city was established using grid iron system in the basin opened to the south. On both sides of the road, two-storey wooden townhouses called *kyomachiya* are built in rows. Currently although reinforced concrete and steel construction buildings are built mainly, there are still many kyomachiyas remain. Traditional methods of conservation and restoration are inherited from citizen and carpenters who have protected the townhouses until today and new technical methods have been studied at the same time. It is aimed to preserve the historical

landscape of Kyomachiyas and hand down that abundant urban life to the future generations. In recent years, many foreign tourists fascinated with this urban life are rapidly increasing.

Kyomachiya has inherited a narrow façade facing to the street and a two-story plan extended longitudinally to the back of the block. Inside of the each townhouse, each room is lined up along the passageway and one or two inner gardens are provided at the same time.

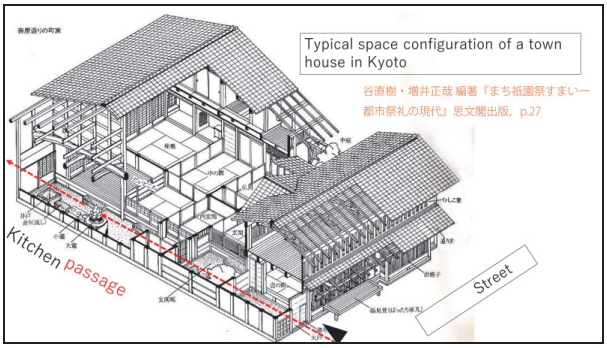


Figure 17: The townhouse in Kyoto is called kyomachiya Reference 3: (Tani, Naoki 谷直樹 & Masui, Masaya 増井正哉編. Machi Gionmatsuri Sumai Toshi Sairei No Gendai: まち祇園祭すまい一都市祭礼の現代 [Town - Gion Festival-House・Town Festival in the Modern City]. Kyoto: Shibunkaku Co. Ltd. 思文閣出版, 1994. Print.)

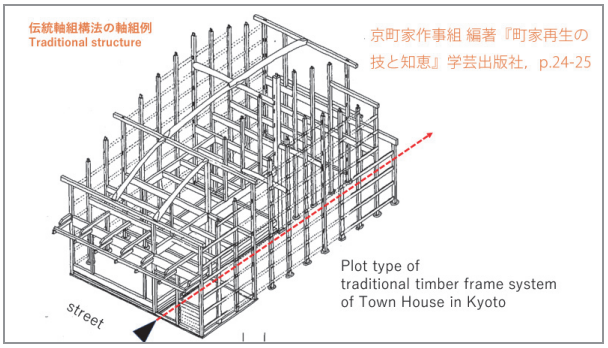


Figure 18: Plot type of traditional timber frame system of Townhouse in Kyoto Reference 4: (Kyomachiya Council 京町家作事組編著. Machiya Saisei No Waza To Chie: 町家再生の技と知恵 [The Techniques and Wisdom of Machiya Revitalization]. Kyoto: Gakugei Publication 学芸出版社, 2002. Print.)

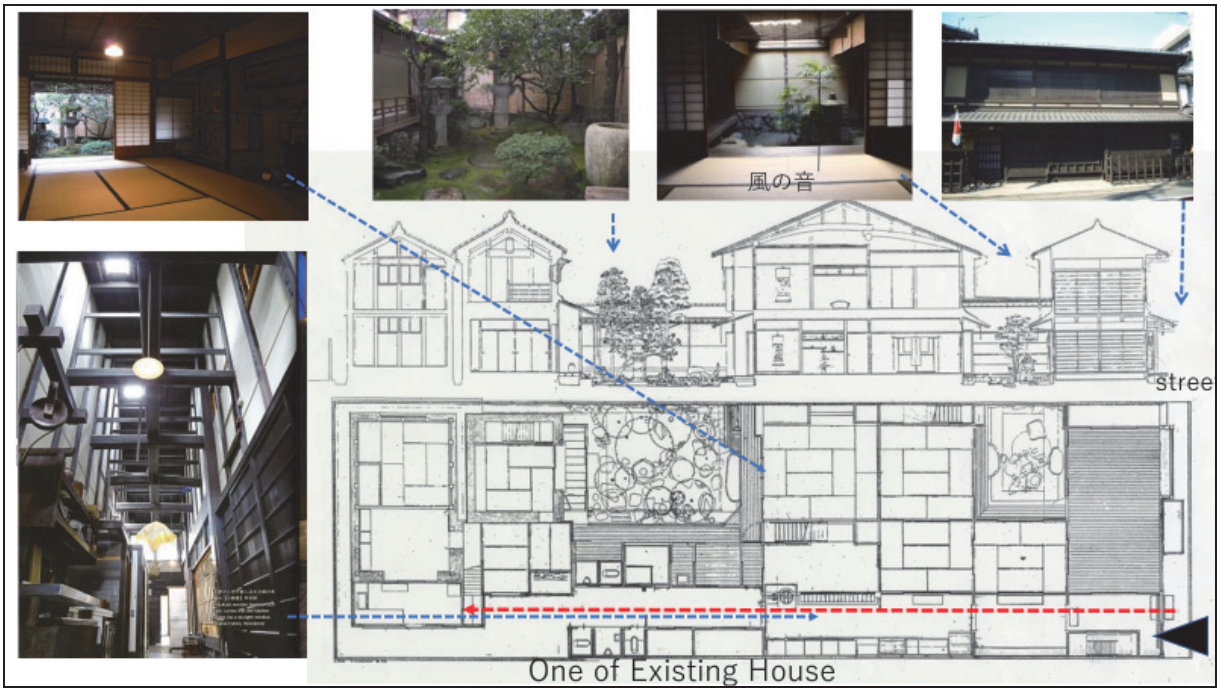


Figure 19: The townhouse in Kyoto is called kyomachiya.

2.1. Replacement of a Member in Timber Structure of Kyomachiya in Case of Need

Figure 20: A member of the timber structure in kyomachiya can be replaced in case of need.

Figure 21: Wall with exposed pillars is called *shinkabe*. It is easy to find its pillar's troubles and easy to repair it.

Figure 22: Re-used pillar for grand-beam sleeper.

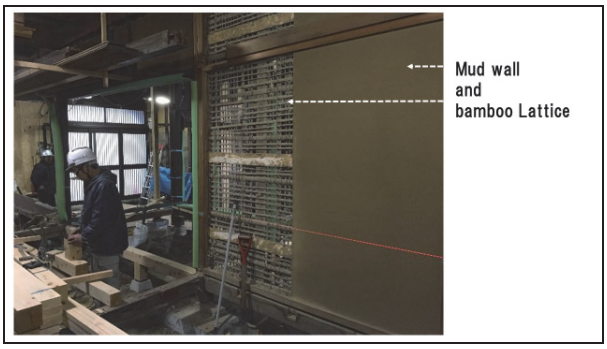


Figure 23: Mud wall and bamboo lattice.

Figure 24: Students practical training for mud wall and bamboo lattice.

2.2. The Standardization of the Size of Tatami Mat, Sliding Door and Inner size of Room of Traditional Townhouse in Kyoto

The size of tatami mat and the size of many kinds of traditional sliding doors have been standardized in the traditional townhouses of Kyoto. Because of this standardization, the inner distance of the rooms and openings of rooms, where Tatami mats and sliding doors are fitted respectively, had to be standardized. The wall core distance of room is ineligible for the standardization. These standardizations achieved the reuse of both sliding doors, Tatami mats and the standardized timbers. The sophisticated townhouse and townscape have been created by these standardizations.

Briefly:
1) The standardization is for the long life of townhouse.

2) For the standardization of timber material, tatami mat and sliding door: inner distance of room should be standardized and wall core distance is ineligible for standardization.
3) Both preservation and reuse of fittings such as sliding doors; fusuma, shoji, etc. should be realized.
4) After all, the sophisticated townhouse and townscape are realized by these standardizations.

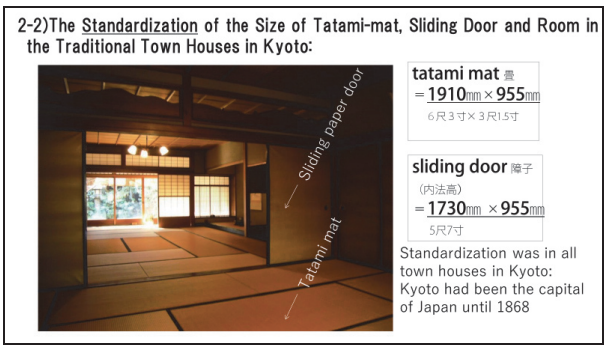


Figure 25: The standardization of the size of tatami mat and sliding door.

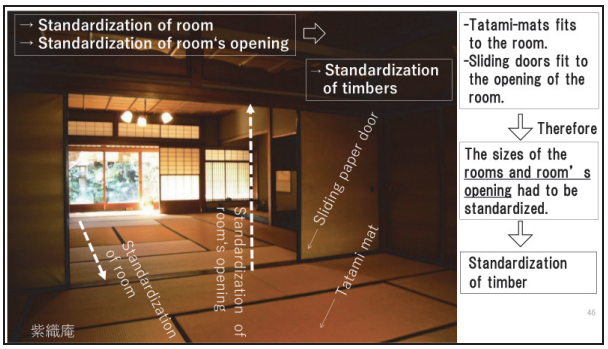


Figure 26: Standardization of the inner size of room.

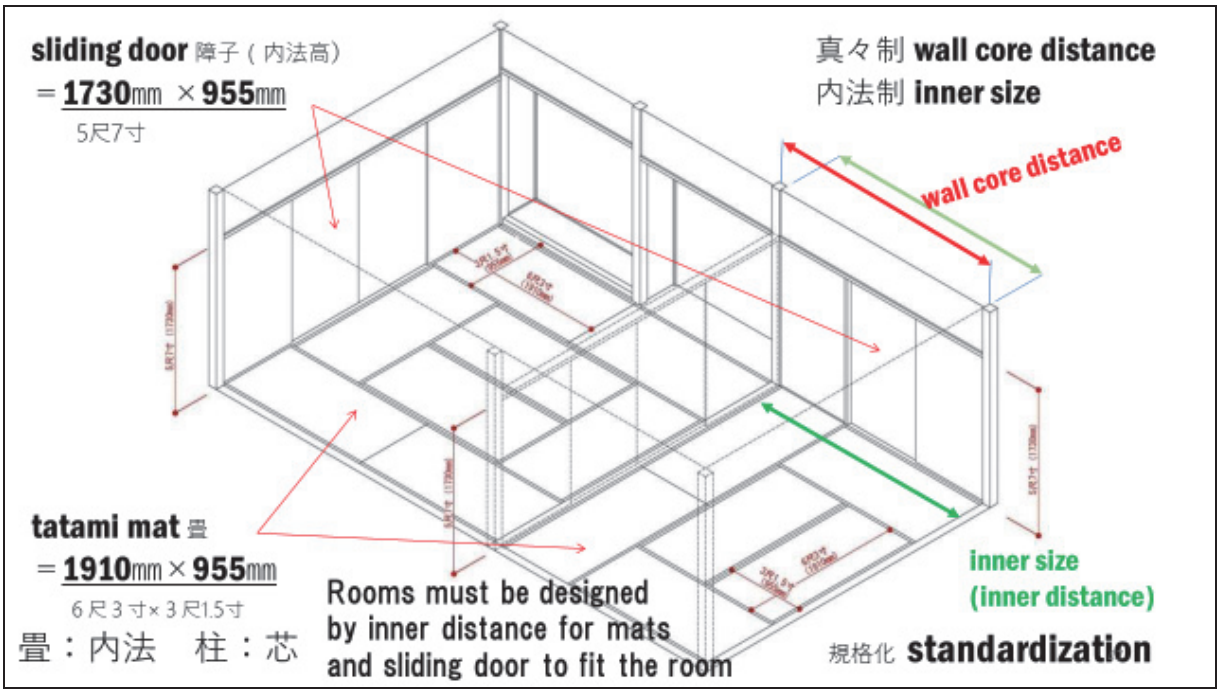


Figure 27: Standardized inner distance and wall core distance of room in Kyoto townhouse.

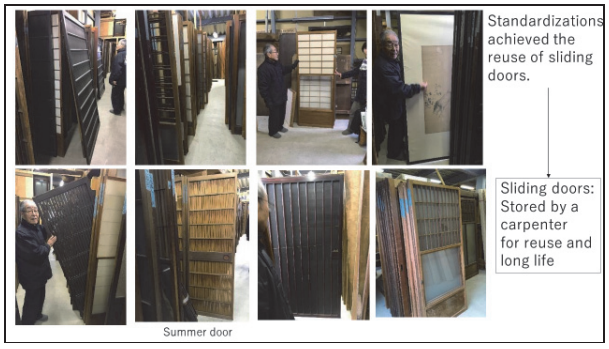


Figure 28: Various kinds of sliding doors stocked by a carpenter.

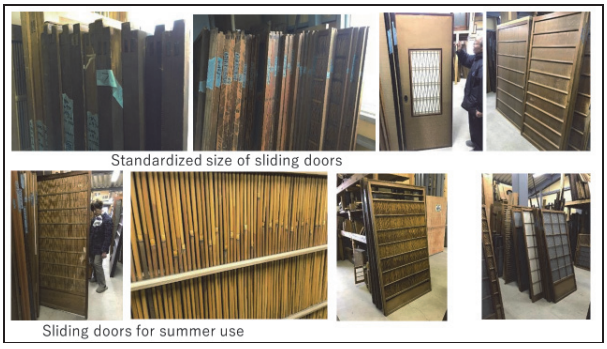


Figure 29: Various kinds of sliding doors stocked by a carpenter/2.

Figure 30: Handle of the sliding paper door.

Figure 31: Sliding door and floor mat for summer.

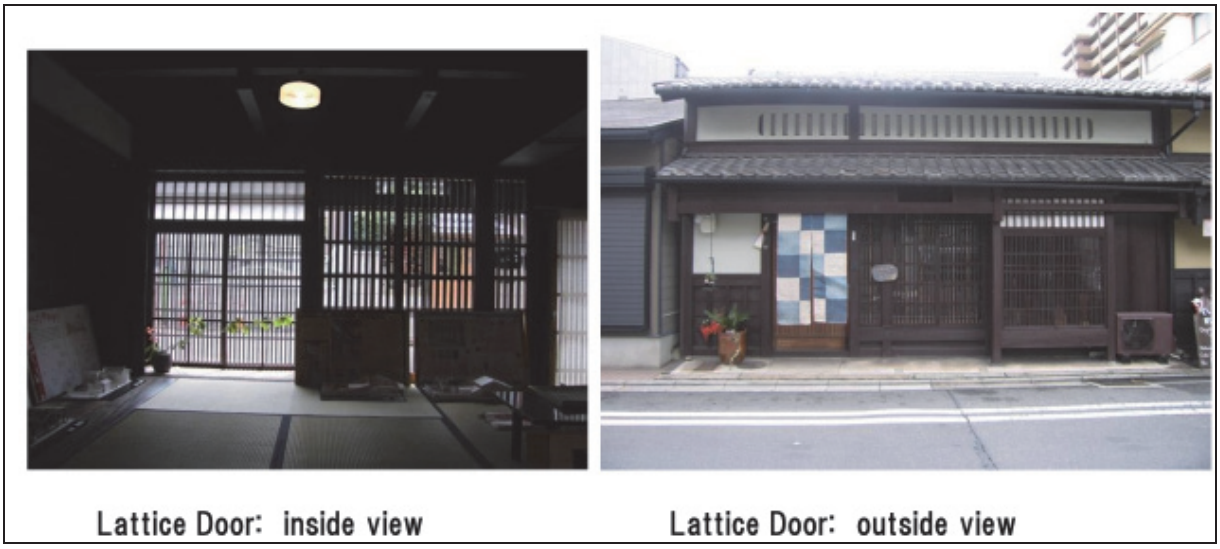


Figure 32: Inside and outside views of lattice door.

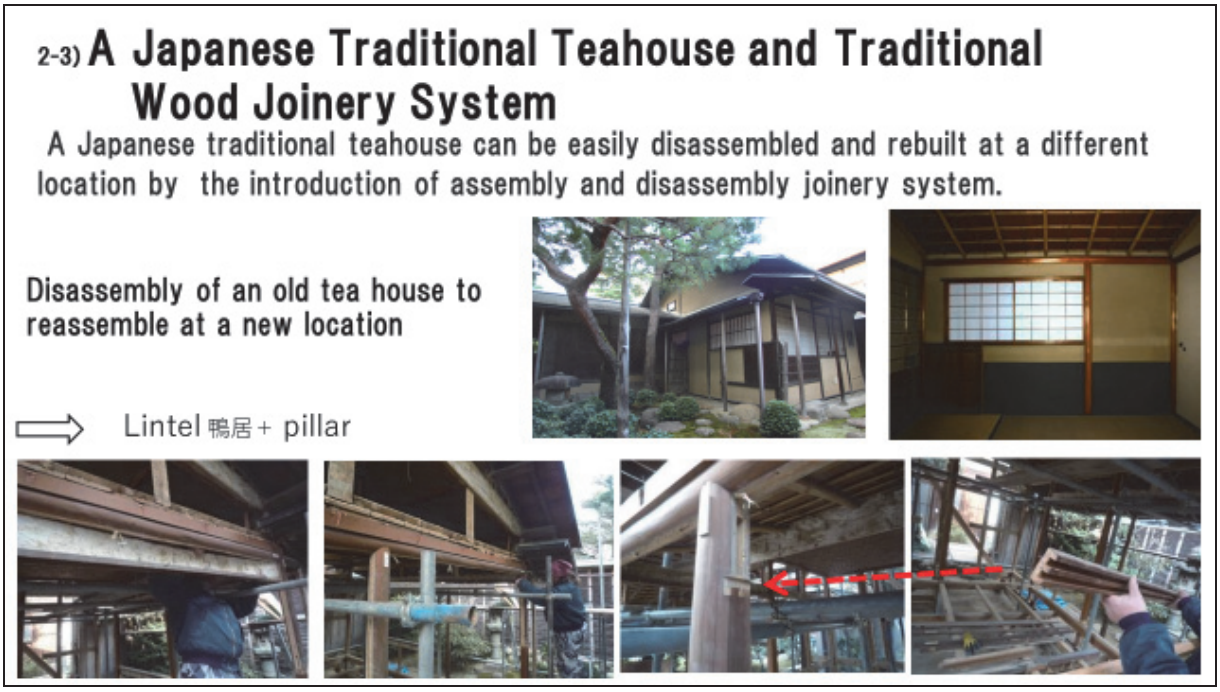


Figure 33: Disassembly of an old tea house to reassemble at a new location.

3. A Japanese Traditional Teahouse and Traditional Wood Joinery System

A Japanese traditional teahouse can be easily disassembled and rebuilt at a different location by the introduction of assembly and disassembly joinery system. In the case of the new traditional teahouse construction, trial assembly of the teahouse is usually executed at the carpenter's atelier: Later on, the structure can be separated into pieces to reassemble at the site.

Figure 34: Disassembly of a joint between pillar and lintel for sliding doors.

Figure 35: Disassembly of a joint between column and doorsill.

Figure 36: Trial assembly of the traditional teahouse in the carpenter's atelier: Later on, the structure can be separated into pieces to reassemble at the site.

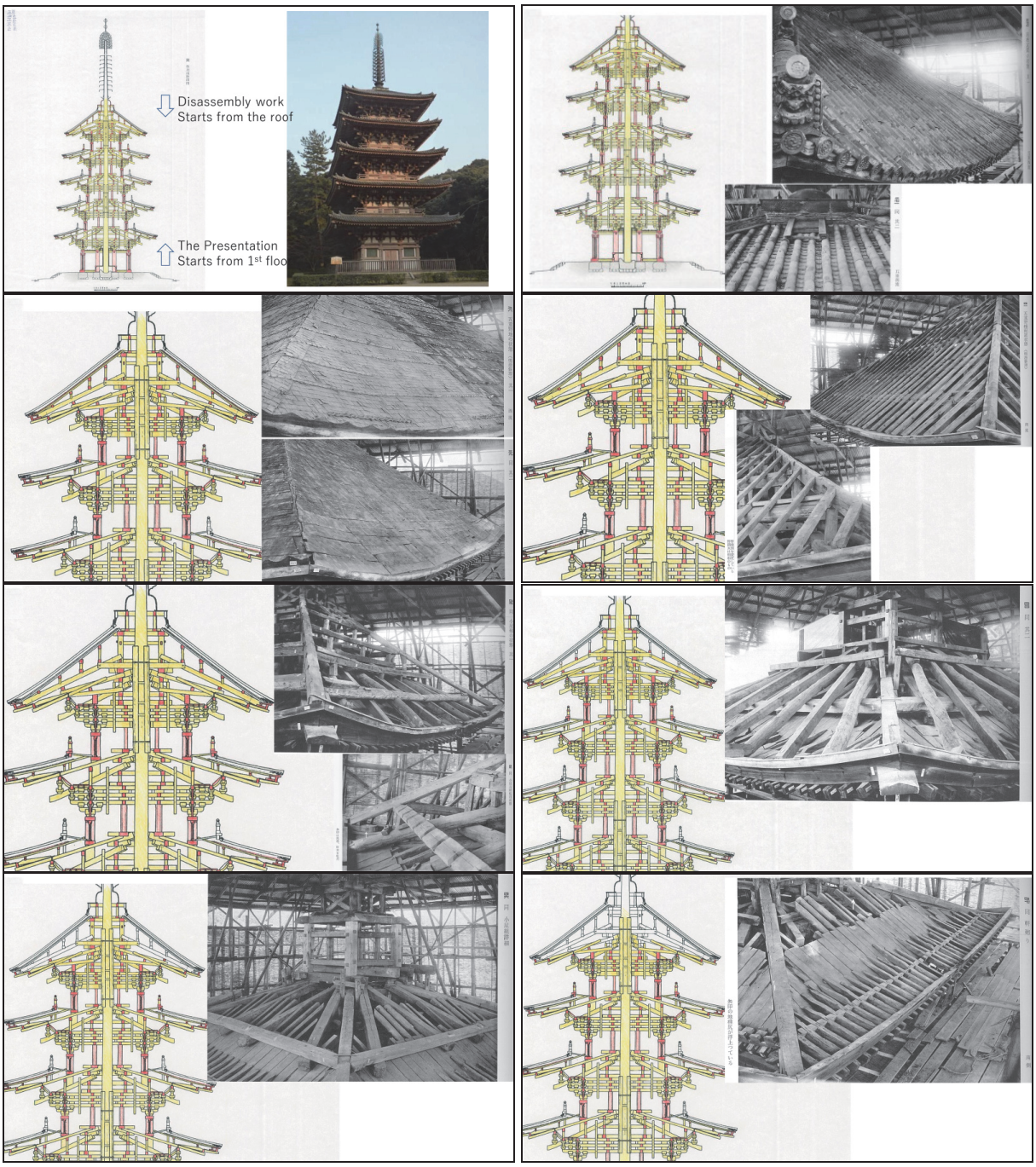
Figure 37: Details of joints.

4. The Sequence of the Disassembly Work of the Pagoda in Daigo-ji Temple

The traditional prefabrication system for the timber structure made the following items possible:
1) Reducing construction period
2) Reuse of the parts
3) Replacement of parts
4) Improvement of the construction precision
5) Design of sophisticated timber structure

In symposium, 51 recorded photographs showing the demolition process of five-story pagoda of Daigo-ji Temple were introduced with cross section of structure for each disassembly process. But

here, one part of it will be introduced. The 14 step of the dismantling process of the top, 5th floor will be shown. The intermediate floors will be omitted and the dismantling process of the ground floor to the foundation will be shown in 8 steps. First, the dismantling process of the top floor will be shown. The following photographs and drawings are cited from Reference 5: (Kyoto Prefectural Office of Education - Cultural Property Preservation Section - Daigo-ji Temple Five-story Pagoda Repair Office 京都府教育庁文化財保護課醍醐寺五重塔修理事務所. Kokuhō Daigo-ji Gojyū No Tō Shūri Kōji Hōkoku-sho: 国宝　醍醐寺五重塔修理工事報告書　[National Treasure of Japan: Daigo-ji Temple Five-story Pagoda Repair Construction Report]. Kyoto: Cultural Properties Division, Kyoto Prefectural Board of Education 京都府教育庁文化財保護課醍醐寺五重, 1960. Print.)



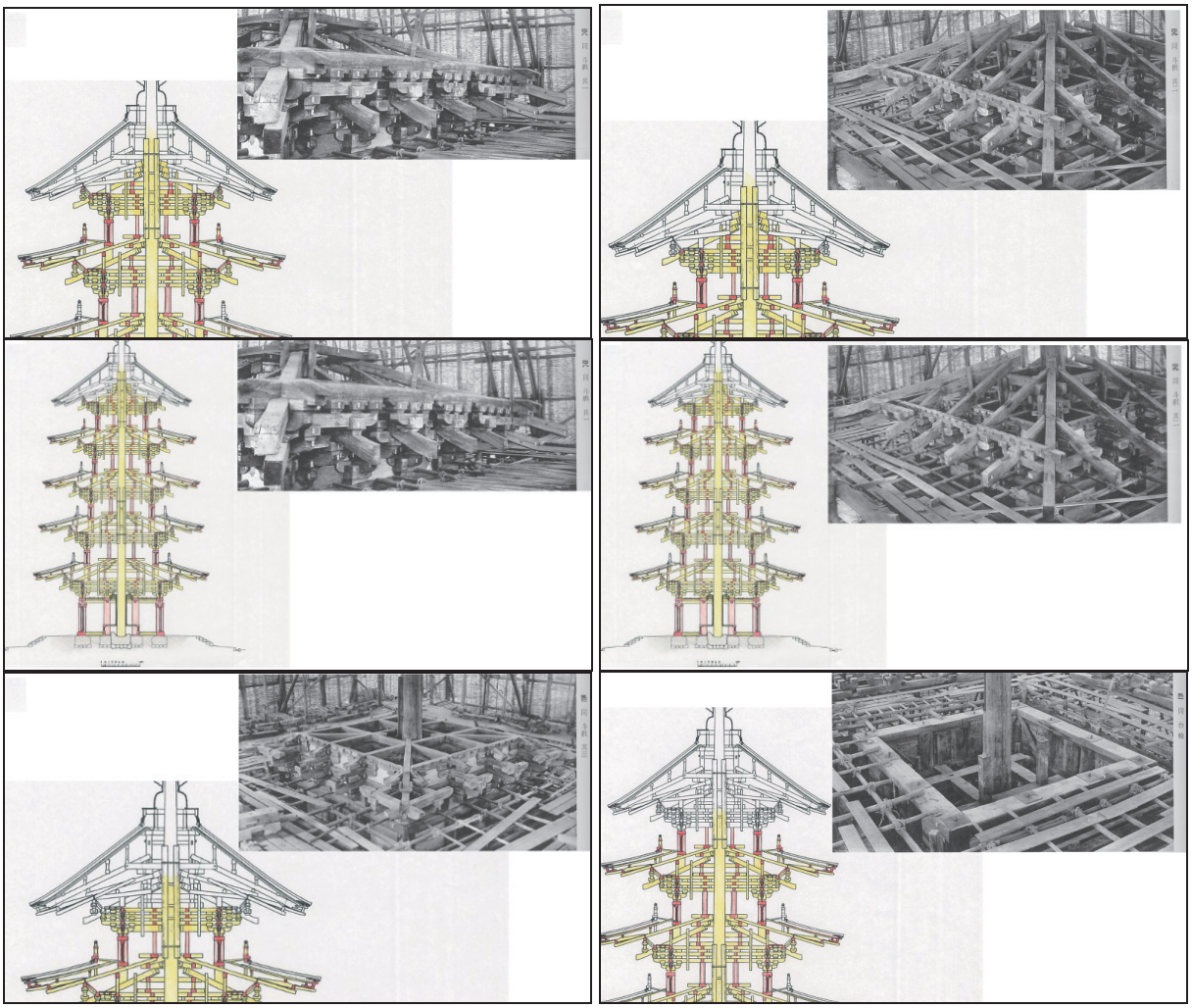
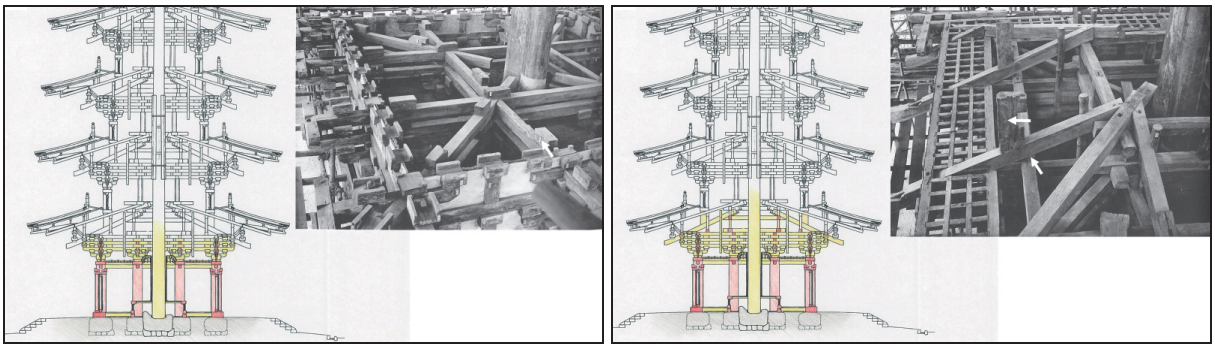


Figure 38: The 14 step process of the disassembly works of the five-story pagoda in Daigoji-Temple.

Next, the disassembly process of 8 steps of ground floor is shown.



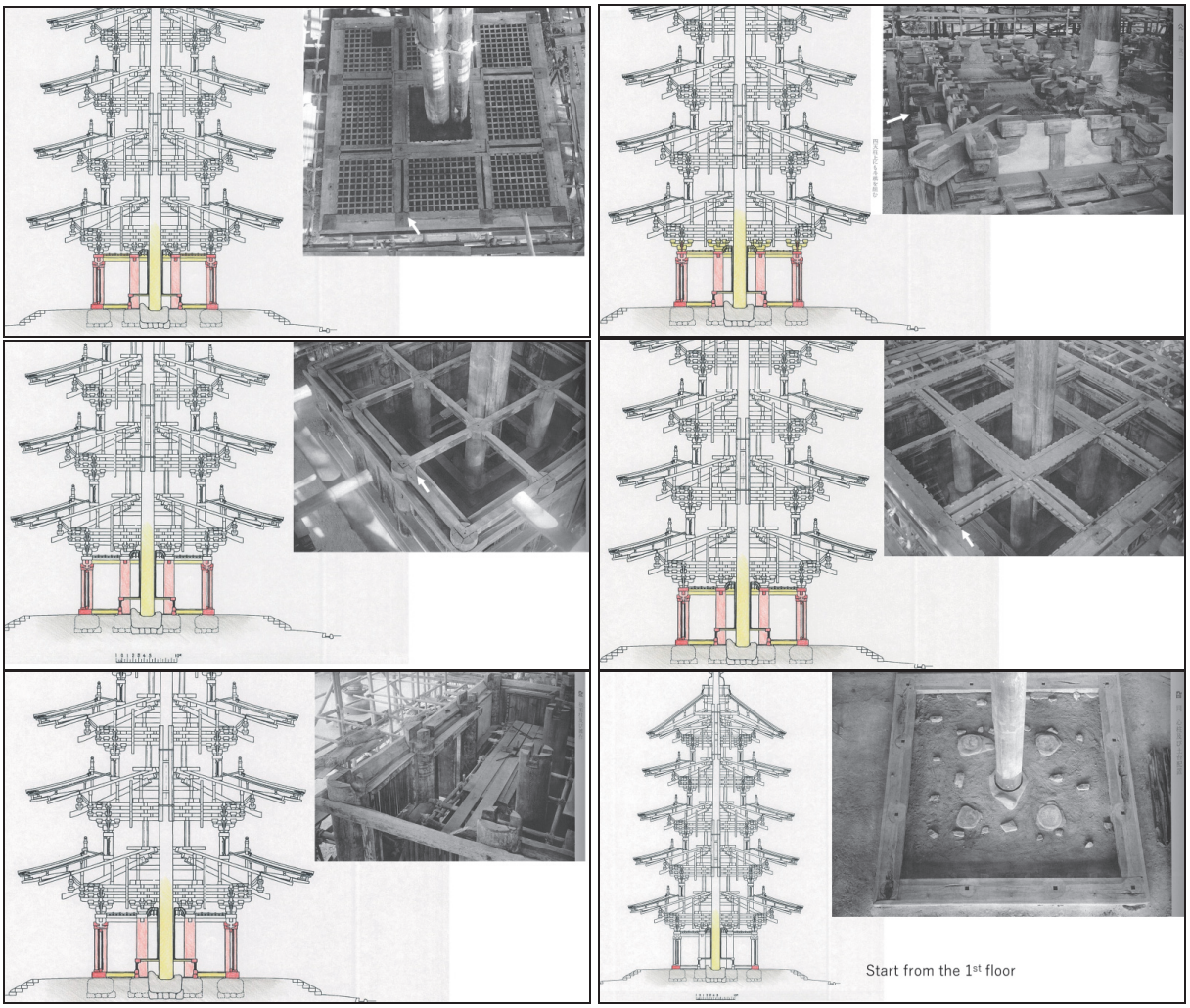


Figure 39: The 8 step process of the disassembly works of the ground floor of pagoda in Daigo-ji Temple.

In our university (Mukogawa Women's University), there is a full-size wooden model which is reconstruction of the eave in ground floor of five-story pagoda, Daigo-ji Temple. This model is assembled from many parts. It is possible to introduce working principle of assembly and disassembly to the students any time. In the symposium, assembly and disassembly process were presented through animation. The video, presented at the symposium, shows that carpenters and students work for disassembly and assembly of the mockup of the square framing (*masugumi* - interlocking wooden brackets) of five-story pagoda of Daigo-ji Temple in Kyoto.

Figure 40: The Five-story pagoda of Daigo-ji Temple. The mockup of the square framing surrounded by a red frame was built in our architecture department.

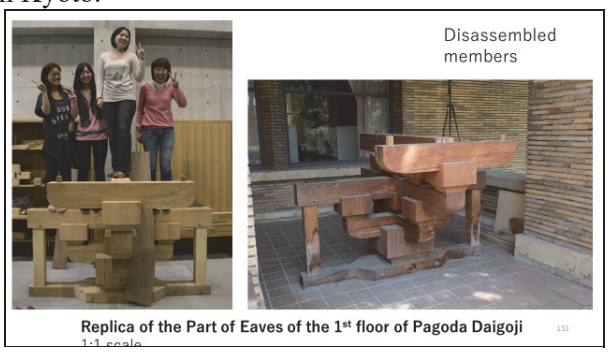


Figure 41: The mockup of the square framing of the 1st floor eaves of the pagoda of the Daigo-ji Temple.

Figure 42: The disassembled parts of the square-framing of the pagoda of Daigoji-Temple.

Figure 43: Assemble process of the mockup of square framing of eave of pagoda.

5. Wide Eaves and Spatial Organization Created by Eaves on Each Floor as a Characteristic of Traditional Japanese Architecture & The Long Log Called Hanegi Supports the Wide Eaves of Japanese Traditional Timber Structure

Architect Kenzo Tange attached beautiful eaves to each floor in the design of the Kagawa Prefectural Office Building. It has a high reputation in the worldwide for expressing the traditional space of Japanese architecture with reinforced concrete. Japanese castles have eaves on each floor with roof. But the ones belong to the west has only a roof. There are no eaves on each floor. F. L Wright was impressed with the eaves of the Japanese pavilion Phoenix Hall of the Expo in Chicago in 1883, and designed Robie House with wide eaves in 1910.

Figure 44: Architect Kenzo Tange attached beautiful eaves to each floor in the design of the Kagawa prefectural office building. It has a high reputation in the worldwide for expressing the traditional space of Japanese architecture with reinforced concrete.

Figure 45: Japanese castles have eaves on each floor with roof. But the ones belong to the West has only a roof. There are no eaves on each floor.

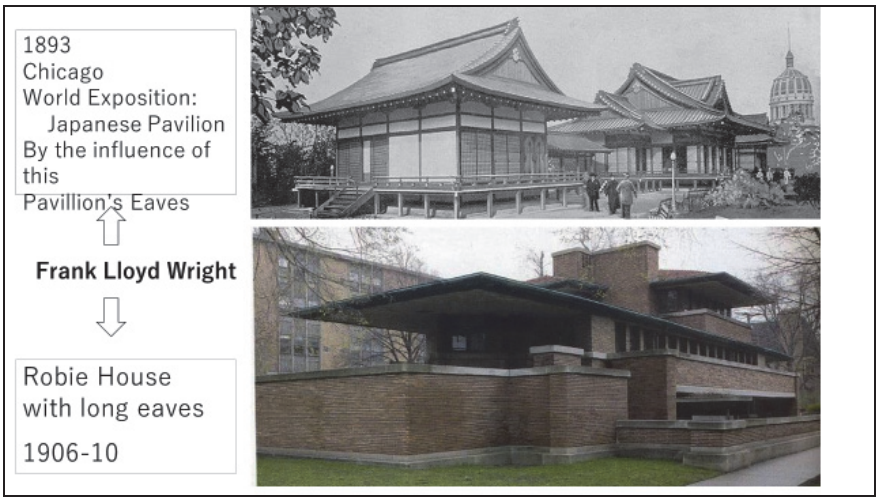


Figure 46: F. L Wright was impressed with the eaves of the Japanese pavilion Phoenix Hall of the Expo in Chicago in 1883, and designed Robie House with wide eaves in 1910.

The long log called hanegi supports the wide eaves of Japanese traditional timber structure. The wide eaves had been created by the development of hanegi system as a result of the conservation of the timber structures against Japanese climate. Annual rainfall averages 1500 mm. The wide eave creates the shadows and a feeling of serenity inside the room.

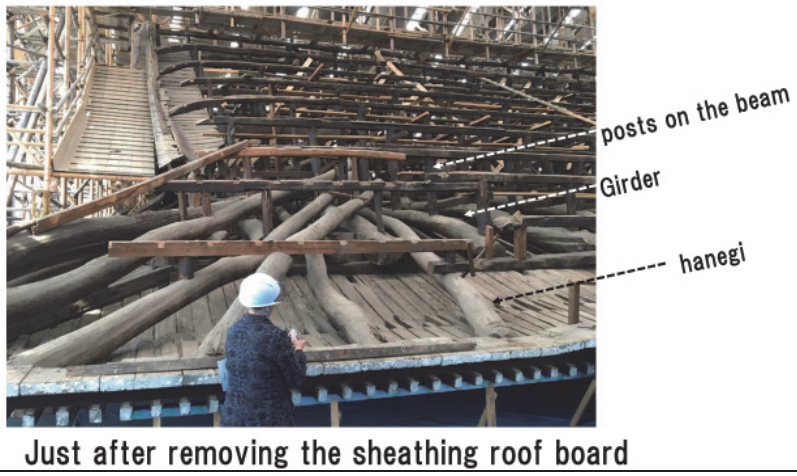


Figure 47: The long sloping logs called hanegi holding up the eave at the restoration site of Honryu-ji Temple, Kyoto.

Figure 48: New hanegi and old hanegi reused.

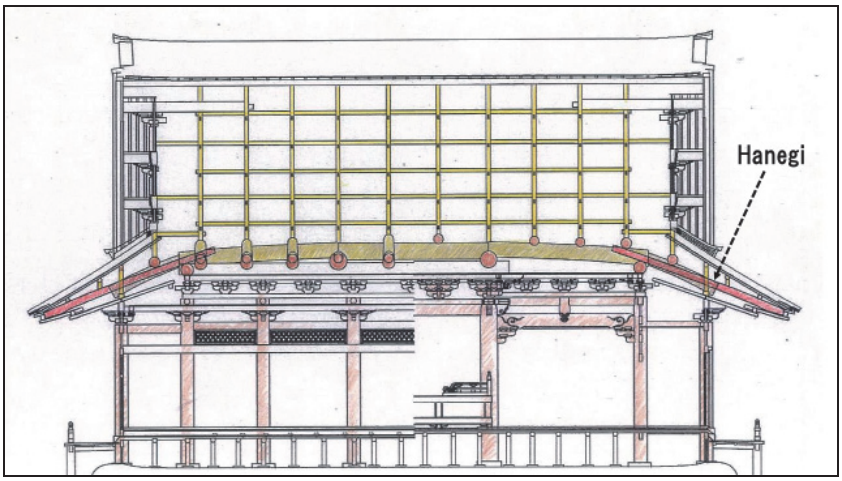


Figure 49: Hanegi in section (Drawing provided by 京都府教育庁文化財保護課 [Kyoto Prefecture Board of Education])

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Intercultural Understanding, 2019, volume 9, pages 56-59

Silk Road Culture and Architecture Lecture Series ＃08

Indian Buddhist Culture and the Silk Road: The Beautiful Colors and Skills of the Craft

Date： **May 26 (Saturday), 2018, 13:00～**
Venue： **The Industry Club of Japan Hall (Tokyo, Japan)**
Lecturers： **Prof. Yasuko FUKUYAMA**
(Faculty of International Studies, Ryukoku University)
Assoc. Prof. Yoshiko SHIMADZU (National Museum of Japanese History)
Performer： **Ms. Miki NONAKA (Eastern Indian-style Dancer)**

The 8th "Silk Road Culture and Architecture Lecture Series", entitled "Indian Buddhist Culture and the Silk Road: The Beautiful Colors and Skills of the Craft", sponsored by Mukogawa Women's University School of Architecture, Graduate School of Architecture Major and co-sponsored by the Tokyo Center, was held on Saturday, May 26, 2018, at the Industry Club of Japan in Marunouchi, Tokyo. In addition to lectures by Yasuko Fukuyama, professor of international studies at Ryukoku University, and Yoshiko Shimadzu, associate professor of information materials research in the Research Department of the National Museum of Japanese History, Miki Nonaka (an Eastern Indian-style dancer) was invited to perform the classical Indian dance Odissi.

Yasuko Fukuyama presented a lecture entitled "The Various Aspects of Indian Buddhist Culture as Seen Through Cave Art with a Focus on the Ajanta Cave Temple." She first spoke about ancient Indian Buddhist architecture and its historical background and explained the particularities of earlier and later period cave temples. In addition, she provided an overview of the Ajanta Cave Temple and detailed commentary on the multi-colored stone Buddhist statues, murals, and architectural decoration inside each cave. Finally, she introduced points of connection between ancient Indian Buddhist ruins and modern Japan.

At this lecture series, Miki Nonaka performed the classical Indian Odissi dance. Odissi (Orissi) is a traditional dance of the Eastern Indian state of Odisha; it is also recognized by the Indian government as one of the eight classical dances of India. The dance combines masculine square forms with beautiful feminine curvaceous forms, and since many of the poses are modeled after the temple sculptures of the Odisha region, the dance is often described as a "moving sculpture." With the bells on her feet jingling, Ms. Nonaka performed the magnificent dance and explained the dance formations and the use of the hands for expression.

Yoshiko Shimadzu presented a lecture entitled "Architectural Painting and Wall Painting at the Ajanta Cave Temple from the Perspective of the Painting Materials Used." Colorful paintings have been preserved on the ceilings and walls inside the Ajanta Caves, and Associate Professor Shimadzu provided a detailed explanation of the materials used for the paintings as well as the scientific method used to examine them. She explained that the painting materials included natural resources, such as local earth, stones, plants, and insects, as well as items from the Silk Road and further noted that materials varied according to time period and factors such as technological development.

Opening address by Professor Okazaki, Head of the Department of Architecture

Prof. Yasuko Fukuyama

Assoc. Prof. Yoshiko Shimadzu

Performance by Ms. Miki Nonaka

The Industry Club of Japan Hall

Silk Road Culture and Architecture Lecture Series ＃09

The Culture of Stupa-Beliefs

Date： **January 19 (Saturday), 2019, 13:00～**
Venue： **The Industry Club of Japan Hall (Tokyo, Japan)**
Lecturers： **Prof. Akira MIYAJI**
(Professor Emeritus of Nagoya University and Ryukoku University)
Assoc. Prof. Shumpei IWAI (Ryukoku Museum, Ryukoku University)
Performer： **Mr. Tarō TERAHARA (Bansuri Player), Ms. Ayako IKEDA (Tabla Player), and Ms. Makiko IZAWA (Tanpura Player)**

The 9th "Silk Road Culture and Architecture Lecture Series", entitled "The Culture of Stupa-Beliefs", sponsored by Mukogawa Women's University School of Architecture, Graduate School of Architecture Major and co-sponsored by the Tokyo Center, was held on Saturday, January 19, 2019, at the Industry Club of Japan in Marunouchi, Tokyo. In addition to lectures by professor emeritus of Nagoya University and Ryukoku University Akira Miyaji, and Associate Professor of Ryukoku University and Curator of Ryukoku Museum Shumpei Iwai, Tarō Terahara (bansuri player), Ayako Ikeda (tabla player), and Makiko Izawa (tanpura player) were invited to perform classical music from Northern India.

Akira Miyaji presented a lecture entitled "The Shape of the Stupas/Pagodas and Worldview: India's Origins and Evolution". Regarding India's stupas, which are said to be both the tombs for the relics of the historical Buddha and symbols of the immortal earthly paradise of nirvana, he provided detailed commentary on their origins, their image and worldview, and development. He also spoke about stupas in relation to sacred trees and pillars, their connection to a belief in the cosmic axis, their influence on the building of high pagodas in Hinduism, and developments in Chinese and Japanese pagodas.

Shumpei Iwai presented a lecture entitled "Stupas of Gandhara: Their Periods and Spread". Gandhara is the ancient name for the area covering from what is now Eastern Afghanistan to Northwestern Pakistan; it was a strategic point of exchange connecting India to central Asia. The Buddhism which had been transmitted from India changed in Gandhara; "Buddhist statues" and "copies of the sutras" started being made, later spreading to central Asia and to the western regions of China. Beginning with the Buddhist ruins that remain in Gandhara, he provided detailed commentary on temple structures and characteristics, with a focus on stupas.

The lecture series featured a classical Indian music performance, including Tarō Terahara on bansuri (wind instrument), Ayako Ikeda on tabla (percussion/rhythm), and Makiko Izawa on tanpura (stringed instrument/basso continuo). Classical Indian music developed as the music of the imperial court of the Mughal Empire; it is performed by improvisation based on the sound and melody of the "raga" determined by factors such as the time and season of the performance. The bansuri is a transverse flute with 6 finger holes, made of a special kind of bamboo grown in Northeast India with long internodes. The performance included songs centered around this flute such as "Raag Hamsadhvani/Swan Song".


Prof. Akira Miyaji


Assoc. Prof. Shumpei Iwai


Performance of Classical Music from Northern India


The Industry Club of Japan Hall

Intercultural Understanding, 2019, volume 9, pages 60-62

ITCS Seminar ＃01 (2018 Academic Year)

Climate, Material, and Construction Methods: Mongolian Cities and Their Architecture

Date： **March 7 (Thursday), 2019, 13:30～16:00**
Venue： **K-222, Koshien Hall**
Lecturers： **Dr. Muping BAO**
(Cooperative Researcher, Institute of Industrial Science, The University of Tokyo)

The 1st Seminar of the Institute of Turkish Culture Studies of the 2018 academic year was held at the Kōshien Kaikan on Thursday, March 7th, 2019. Muping Bao, PhD, Cooperative Researcher, Institute of Industrial Science, The University of Tokyo, was invited. She gave a lecture titled, “Climate, Material, and Construction Methods: Mongolian Cities and Their Architecture.”

Dr. Bao gave lectures at two of our seminars this academic year. This was the first of the two, in which she explicated the spatial arrangements within the cities, Buddhist temples, and traditional dwellings called ger of Mongolia. In the first half of the lecture, Dr. Bao spoke about the style of dwellings and urban formation adapted to the nomadic lifestyles of Mongolian people. Dr. Bao also gave a detailed account of the methods and material used to build ger dwellings. In the second half of the lecture, Dr. Bao spoke about Mongolian Buddhist architecture of the sixteenth century and onward through a comparison with Japan.

The audience asked a number of questions during the time allocated following the lecture. Japan and Mongolia, two of the countries in Asia, have many similarities in terms of architecture and religion. Discussions continued and with the second lectured scheduled for the following week on Wednesday, March 13th, we closed this interaction on a lively note.

Seminar Poster


Venue at Koshien Hall

ITCS Seminar ＃02 (2018 Academic Year)

Architecture Imported through the Silk Road to China during the Thirteenth Century

Date： **March 13 (Wednesday), 2019, 13:30～16:00**
Venue： **K-222, Koshien Hall**
Lecturers： **Dr. Muping BAO**
(Cooperative Researcher, Institute of Industrial Science, The University of Tokyo)

The 2nd Seminar of the Institute of Turkish Culture Studies of the 2018 academic year was held at the Kōshien Kaikan on Wednesday, March 13th, 2019. We invited Muping Bao, PhD, Cooperative Researcher, Institute of Industrial Science, The University of Tokyo. She delivered a lecture titled "Architecture Imported through the Silk Road to China during the Thirteenth Century."

Dr. Bao lectured at two of our seminars this academic year. This lecture was the second of the two, in which she gave a chronological account of cities and architectural structures of the thirteenth century, during the time of the Mongolian Empire. While the architectural culture of this time centered on wooden construction, that of Western Asia and Central Asia had different architectural elements, such as stone construction, masonry of sun-dried bricks, domes, arches, and vaults. Introducing many architectural examples, including Islamic mosques and Buddhist temples, Dr. Bao explicated, in a clear manner, the forms of coexistence and fusion between the original architectural culture of the Mongolian Empire and the different architectural systems introduced from Western Asia and Central Asia. Additionally, Dr. Bao gave a detailed account of the exchange of architectural culture on the Silk Road, covering topics such as Tibetan and Indian influences on Buddhist architecture in the Mongolian Empire.

During the lecture, Dr. Bao also shared some valuable photographs from the field research in Mongolia, China, the Xinjiang Uygur Autonomous Region, Uzbekistan, and other places, thus creating a vivid picture of architectural and cultural exchanges along the Silk Road.

Seminar Poster


Venue at Koshien Hall

ITCS Seminar ＃03 (2018 Academic Year)

Chinese Buddhist Cave Sites from the Perspective of Architectural Space: With a Focus on the Mogao Caves in Dunhuang and the Maijishan Grottoes

Date： **March 15 (Friday), 2019, 13:30～16:00**
Venue： **K-222, Koshien Hall**
Lecturers： **Dr. Kaoru SUEMORI (Research Fellow, National Museum of Ethnology)**

The 3rd Seminar of the Institute of Turkish Culture Studies of the 2018 academic year was held at the Kōshien Kaikan on Friday, March 15th, 2019. Kaoru Suemori, PhD, Research Fellow at Research Center for Cultural Resources, National Museum of Ethnology, was invited as the lecturer. He delivered a lecture titled, “Chinese Buddhist Cave Sites from the Perspective of Architectural Space: With a Focus on the Mogao Caves in Dunhuang and the Maijishan Grottoes.”

Dr. Suemori first provided an overview of the Buddhist cave sites in China. This was followed by a chronological account of the spatial arrangements of the interiors of the Maijishan Grottoes, with special attention to structures and architectural elements depicted in the wall paintings. Dr. Suemori also explained how he analyzed a mortice in the face of a cliff, to reveal the existence of a structure that had so far not been discovered.

In the second half of the lecture, Dr. Suemori provided an overview of the Mogao Caves of Dunhuang and elaborated on how the caves functioned as religious spaces, based on cues taken from the murals. Specifically, he explained how the analysis of the copious wall paintings in the caves depicting many Buddhas led to inferences regarding changes in the cave spaces and the meaning thereof.

Following the lecture, the time allocated for asking questions developed into an active discussion on the murals, the iconography, and other topics. Overall, the seminar turned out to be an intriguing one that traced an interesting facet of the long history of the Silk Road.

Seminar Poster


Venue at Koshien Hall

Annual Events Apr. 2018- Mar. 2019

Date	Events
April 24-25, 2018	**Prof. Shigeyuki OKAZAKI, Director of ITCS, attended the "Symposium on Restoration and Conservation of Traditional Timber Structures 6" in Istanbul.**
January 20, 2018	**"Silk Road Culture and Architecture" Lecture Series #08** "*Indian Buddhist Culture and the Silk Road: The Beautiful Colors and Skills of the Craft*" (Prof. Yasuko FUKUYAMA, Faculty of International Studies, Ryukoku University / Assoc. Prof. Yoshiko SHIMADZU, National Museum of Japanese History / Ms. Miki NONAKA, Eastern Indian-style Dancer)
July 10-August 3, 2018	**Inter Cultural Studies of Architecture (ICSA) in Japan 2018**
January 19, 2019	**"Silk Road Culture and Architecture" Lecture Series #09** "*The Culture of Stupa-Beliefs*" (Prof. Akira MIYAJI, Professor Emeritus of Nagoya University and Ryukoku University / Assoc. Prof. Shumpei IWAI, Ryukoku Museum, Ryukoku University / Mr. Tarō TERAHARA, Bansuri Player / Ms. Ayako IKEDA, Tabla Player / Ms. Makiko IZAWA, Tanpura Player)
February 19-March 2, 2019	**Inter Cultural Studies of Architecture (ICSA) in Rome 2019**
March 7, 2019	**ITCS Seminar #01 (FY2018)** "*Climate, Material, and Construction Methods: Mongolian Cities and Their Architecture*" (Dr. Muping BAO, Cooperative Researcher, Institute of Industrial Science, The University of Tokyo)
March 13, 2019	**ITCS Seminar #02 (FY2018)** "*Architecture Imported through the Silk Road to China during the Thirteenth Century*" (Dr. Muping BAO, Cooperative Researcher, Institute of Industrial Science, The University of Tokyo)
March 15, 2019	**ITCS Seminar #03 (FY2018)** "*Chinese Buddhist Cave Sites from the Perspective of Architectural Space: With a Focus on the Mogao Caves in Dunhuang and the Maijishan Grottoes*" (Dr. Kaoru SUEMORI, Research Fellow, National Museum of Ethnology)

OUTLINE OF THE INSTITUTE OF TURKISH CULTURE STUDIES

Organization

Position	Affiliation	Title	Name
Director	Department of Architecture	Professor	Shigeyuki Okazaki
Researcher	Department of Architecture	Professor	Shigeki Tosu
		Professor	Satoshi Matsushita
		Professor	Yusei Tazaki
		Professor	Noritoshi Sugiura
		Professor	Kazuhiko Yanagisawa
		Professor	Toshitomo Suzuki
		Professor	Haruyoshi Sowa
		Professor	Azusa Uemachi
		Associate Professor	Fumie Ooi
		Associate Professor	Hiroyuki Tagawa
		Associate Professor	Akira Tanaka
		Associate Professor	Hideaki Tembata
		Associate Professor	Keisuke Inomata
		Associate Professor	Tomoko Uno
		Associate Professor	Junko Morimoto
		Lecturer	Aya Yamaguchi
		Assistant Professor	Yuuka Nakamura
		Assistant Professor	Yuna Tanaka
		Visiting Professor	Kunihiko Honjo
Visiting Researcher	Bahçeşehir University (Turkey) Faculty of Architecture and Design	Professor	Murat Dündar
Assistant	Department of Architecture	Assistant	Rimako Funato
		Assistant	Yuka Kawasaki
	Institute of Turkish Culture Studies	Assistant	Beyza Nur Bozkurt
Secretariat	Secretariat Division of School of Human Environmental Sciences	Chief Clerk	Miyuki Nakaichi

Reviewers of *Intercultural Understanding*

Name	Title and Affiliation
Yasushi Asami	Professor, The University of Tokyo, Japan
Mitsuo Takada	Professor Emeritus at Kyoto University, Japan
Shuichi Hokoi	Professor Emeritus at Kyoto University, Japan
Kosaku Maeda	Professor Emeritus at Wako University, Japan
Minako Mizuno Yamanlar	Representative of NPO The Japanese-Turkish Friendship Association, Japan
Kazuya Yamauchi	Professor, Teikyo University, Japan
Hironobu Yoshida	Professor Emeritus at Kyoto University, Japan
Murat Dündar	Professor, Bahçeşehir University, Turkey
Murat Şahin	Associate Professor, Özyeğin University, Turkey
Kazuhiko Yanagisawa	Professor, Mukogawa Women's University, Japan
Toshitomo Suzuki	Professor, Mukogawa Women's University, Japan

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Rules and Regulations of the Institute of Turkish Culture Studies (ITCS) at Mukogawa Women's University

(Establishment)
Article 1 The Institute of Turkish Culture Studies (hereinafter "the Institute") shall be located in Mukogawa Women's University (hereinafter referred to as "the University").
(2) The Institute shall be operated under the administration of the University's Department of Architecture for the time being.

(Objective)
Article 2 The objective of the Institute is as follows:
(i) to conduct comparative studies on life, technology, and culture centered on the architecture of Japan and Turkey as the east and west starting points of the Silk Road, and to clarify the cultural base common to both countries beyond their differences in history, climate, and so forth.
(ii) to conduct, by pursuit of the above-mentioned aims, extensive studies on life, technology, and culture centered on the architecture of neighboring Silk Road countries, clarify similarities among them, and contribute to new mutual understandings that promote the peace and prosperity of the Silk Road region.
(iii) to support international exchange of students predominately in the field of the human environment and conduct international educational activities in the fields of architecture and human environment based on the achievements of the studies mentioned in (i) and (ii).
(iv) to discuss internationally the achievements in research and education mentioned in the preceding three items, introduce (*or* transmit) them to the world in various ways at every occasion, and share common values with people around the world.

(Operation)
Article 3 The operations of the Institute to achieve the above-mentioned objectives are as follows:
(i) to conduct studies in cooperation with the Research Center of Japanese Culture Studies, Bahçeşehir University, Istanbul.
(ii) to hold an international workshop, the "Inter Cultural Studies of Architecture in Japan (ICSA in Japan)," where architecture and human environment students of the world, centered around Turkey, are invited every year in principle to support a similar workshop, the "Inter Cultural Studies of Architecture in Istanbul" that is held at the Research Center of Japanese Culture Studies at Bahçeşehir University, and to send teachers and students of the University's Department of Architecture for research and educational activities.
(iii) to hold seminars, introduce research achievements, exhibit, and organize lectures concerning life, technology, and culture, centered around architecture, to which researchers, business persons, and residents who belong to the field of studies conducted by the Institute are invited.
(iv) to hold permanent and special exhibitions on the life, technology, and culture of neighboring Silk Road countries, centered around Turkey.
(v) to conduct public relations activities, such as publication of the research and educational achievements of the Institute, symposiums, and so forth.
(vi) other operations required to accomplish the aims specified in the preceding article.

(Organization)
Article 4 The Institute may establish research departments with respect to differences in research fields to perform relevant activities.

(Director)
Article 5 The Institute shall install a director.
(2) The chancellor shall appoint the director from among professors.
(3) The director shall be appointed for a period of two years and may be reappointed.
(4) The director handles the operations of the Institute under the president's direction.

(Vice Director and Head of Research Department)
Article 6 The Institute may install a vice director and heads of research in each department referred to in Article 4.
(2) The chancellor shall appoint the vice director and heads of the research departments from among the faculty. The latter positions may be substituted with adjunct teaching staff.
(3) The vice director assists the director and engages in the administrative operations.
(4) The vice director fills in for the director under the director's direction.
(5) Each head controls his research department and engages in research under the director's direction.

(Senior Researcher)
Article 7 The Institute may install senior researchers with the chancellor's approval.
(2) The director appoints senior researchers from among the researchers.
(3) The senior researchers will assist their heads and engage in research.

(Researcher)
Article 8 The Institute shall install researchers as required.
(2) Teachers at Bahçeşehir University may be appointed as researchers.
(3) The researchers will engage in research under the director's direction.

(Temporary Researcher)
Article 9 The Institute may install temporary researchers as needed.
(2) The president appoints temporary researchers upon the recommendation of the director.
(3) The period of the appointment shall be less than one year and may be renewed when necessary.
(4) The temporary researchers will engage in specific research or joint research.

(Assistant)
Article 10 The Institute may install assistants.
(2) The assistants will assist in research under the director's direction.

(Steering Committee)
Article 11 The University shall establish a steering committee for the Institute (hereinafter "the steering committee") to deliberate basic policy concerning the Institute's operation.
(2) The steering committee shall consist of a director and a few members chosen from among the vice director, the heads of the research departments, the senior researchers, and researchers.
(3) The president will appoint the members of the steering committee.
(4) The director shall be the chairperson of the steering committee.
(5) The chairperson shall convene and lead the steering committee.
(6) Members shall be appointed for a period of two years and may be reappointed. When a vacancy arises, the successor's term of office shall be the predecessor's remaining term.
(7) Details of the steering committee shall be otherwise laid down.

(Secretariat)
Article 12 The Institute shall install a secretariat.
(2) The secretariat shall consist of a few members and the chief clerk of the School of Human Environmental Sciences shall be the chief of the secretariat.
(3) The members of the secretariat will handle clerical duties under the guidance and supervision of the chief clerk under the director's direction.

(Supplementary Rules and Directions)
Article 13 In addition to what is provided in these rules and directions, necessary matters concerning the administrative operations of the Institute shall be prescribed by the director.

(Modification or Elimination of the Rules and Regulations)
Article 14 Modification or elimination of the rules shall be implemented with the chancellor's prior approval.

Supplementary Provisions
(1) The rules and regulations shall be enforced beginning on July 29, 2009.
(2) From the day the rules and regulations are enforced until March 31, 2011, the term of the appointed directors and members of the steering committee shall begin on the day when they are appointed and end on March 31, 2011, notwithstanding the provisions of Article 5, paragraph (3) and Article 11, paragraph (6).

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